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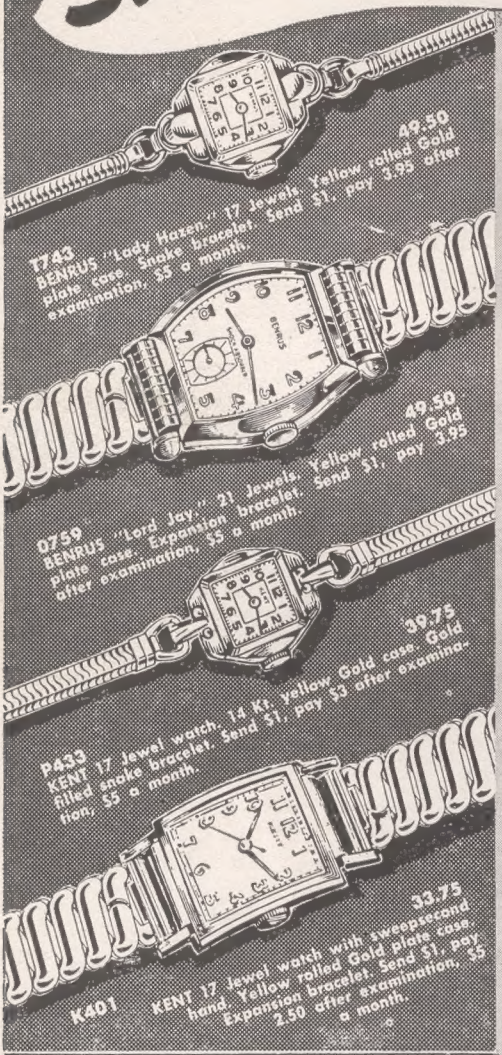

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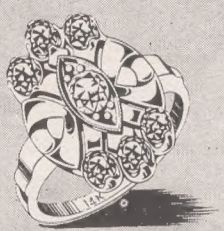

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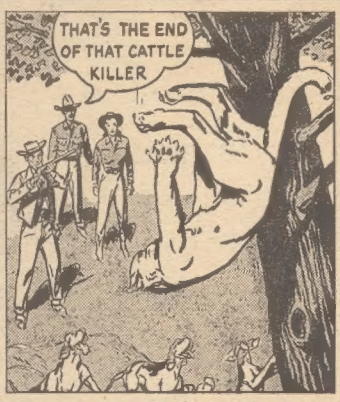

DINNER? THANKS, BUT I'D BETTER DRIVE TO THE RANCH. I'M HARDLY IN SHAPE TO APPEAR IN PUBLIC
DON'T WORRY, WE CAN CLEAN UP IN MY ROOM
HOTEL
LATER

I SURE WISH YOU'D ACCEPT. THERE'S PLENTY OF ROOM AT THE RANCH AND...
WE STILL HAVE A WEEK, SIS. HOW ABOUT IT?
I'D LOVE IT
HE'S SO HANDSOME!

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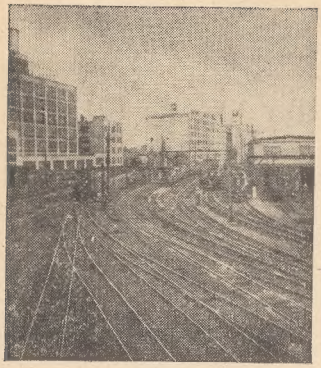

RAILROAD

MAGAZINE

Originally Railroad Man's Magazine, founded 1906

May, 1948 *Vol. 45, No. 4* *35 Cents*

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By Frederick Blakeslee

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EDITOR: Henry B. Comstock
ASSOCIATE EDITORS: H. H. Gross, E. M. Kennedy
ART EDITOR: Thorkild S. Paaby
ELEC. LINES: Stephen D. Maguire
EDITORIAL ASS'T.: Shirley Chidsey

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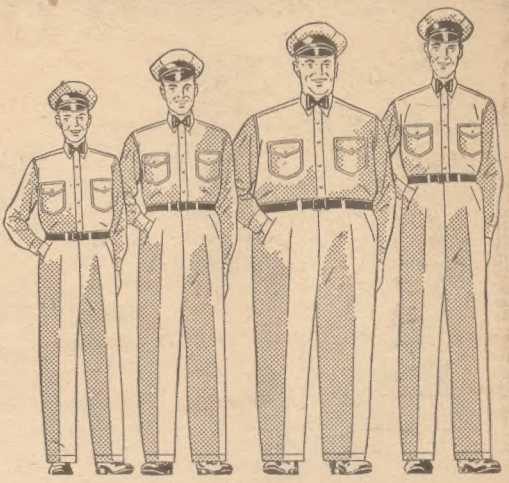

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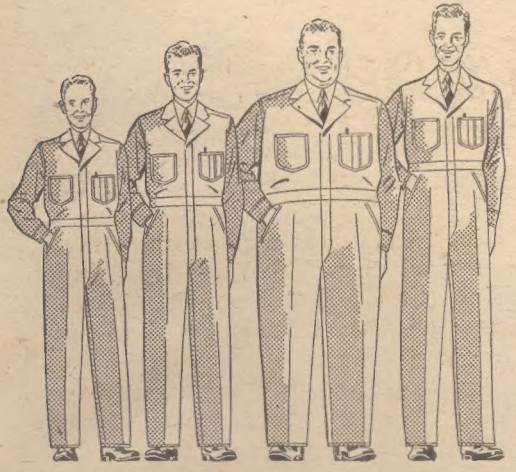

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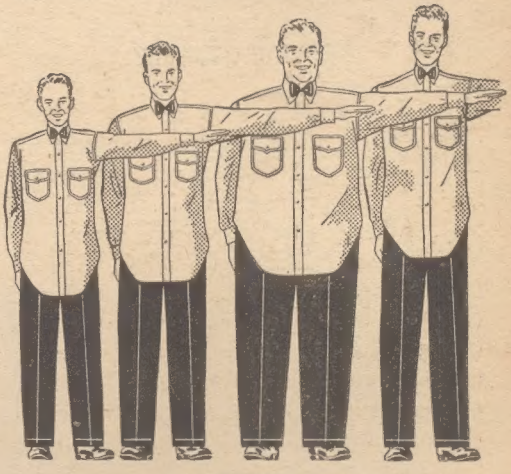

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Railroading through Town Names

Big Timber, Northern Pacific passenger station in Montana

By SYLVIA TALSEY

AS TRAINS stop at the stations along their respective routes, the names of towns contacted weave an interesting panorama of fact and fantasy. American trains go from Train (W. Va.), pass Pullman (Wash.), Sleeper (Okla.) and Car (S. C.), on to Railroad (Pa.), Carrier (Okla.) and Carriers (Ill.). The freight trains haul Lumber (S. C.) and Timber (Ore.), Munition (W. Va.) and Ordnance (Ark.), Wheat (Tenn.), Corn (Okla.) as well as Cotton (Minn.), Bulls (S. C.), Cow (Tex.) and Lamb (Ky.). They may carry perishables like Tomato (Ark.), Onion (Tex.) and Cucumber (W. Va.), Fruit (N. C.), as Pineapple (Ala.), Peach (N. C.) and Pear (W. Va.), and even Flowers (N. C.), or precious Gold (Tex.) and Silver (S. C.).

The trains stop at Factory (W. Va.), Sawmill (La.), Mines (Pa.), Quarry (Wis.) and even Laboratory (N. C.), from the Atlantic (Iowa) to the Pacific (Wash.), New England (N. D.) to Sunny South (Ala.) and Arctic (Wash.) to Tropic (Utah). They run from Spring (Tex.) and Springtime (Mont.), through Summers (Ark.) and Winter (Wis.), from Dawn (Ohio) to Dusk (W. Va.), Sunrise (Wyo.) to Sunset (Ariz.) and from Morning (Ida.) to Midnight (Miss.). Regardless of the weather, trains go through Snow (Ga.) and Ice (Ky.), Rains (S. C.) and Sunshine (Wyo.), Storm (S. D.), Tornado (W. Va.) and Cyclone (Tex.).

Trains pick up their passengers from Young America (Minn.) and America (Okla.) and from Uncle Sam (La.), President (Pa.) and Congress (Ohio), to Kings (Ill.), Queens (W. Va.), Prince (Tex.) and Princess (Ky.). But it really gets its following from Family (Mont.), including Parent (Minn.), Dad (Wyo.), Husband (Pa.), Groom (Tex.), Bride (Tenn.), and Man (W. Va.) and Maiden (N. C.), Friend (Neb.) and Stranger (Tex.), including such intimates as Blondy (Tenn.), Deary (Ida.) and Darling (Minn.). The included passengers are the Army (Ida.) and Navy (Mont.) and Red Cross (La.), Soldier (Kan.) and Veteran (Wyo.), and certainly Santa

WHERE A MAN IS STILL IMPORTANT!

MACHINES are important. Inventions are important. But it's *men* who win wars and guard the peace.

No one knows that any better than the U. S. Army. That's why you'll find real men in the U. S. Infantry, Artillery, and Armored Cavalry.

These arms—the Combat Forces—are the fighting heart of the Army. Other branches exist only to support them. The Combat Soldier today has the finest equipment and transport ever devised—but he is also top-notch *as a man*. Courageous. Strong and hard physically. Alert. Intelligent.

If you're that kind of man, you'll find a welcome—and real comradeship—in the Combat Forces. It's a good life today, with high pay and training in many valuable skills and trades. If you're between 18 and 34 (17 with parents' consent) and above average physically and mentally, ask about the Combat Forces.

U. S. Army and U. S. Air Force Recruiting Service

CAREERS WITH A FUTURE

U. S. Army and U. S. Air Force

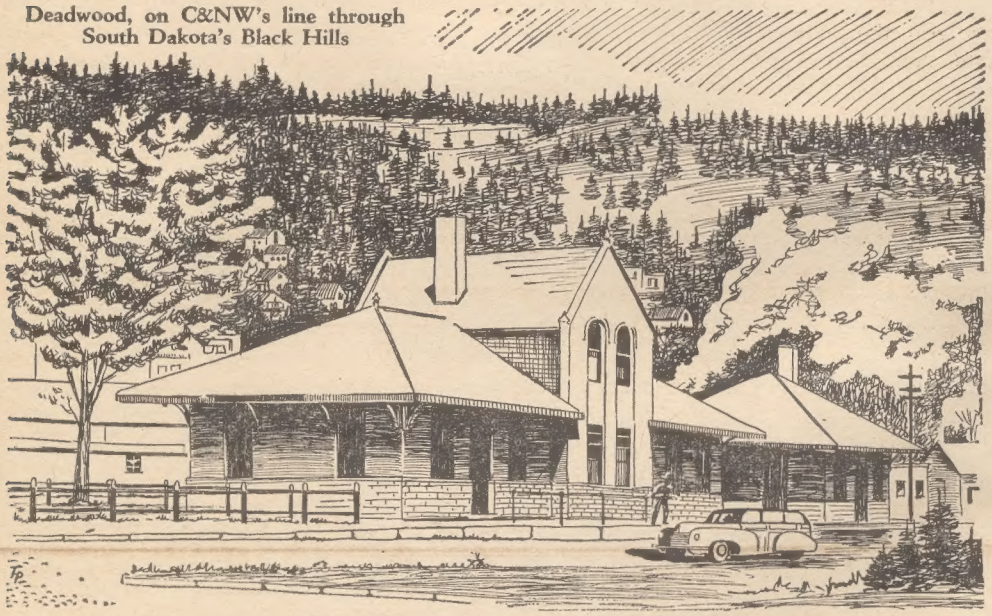
Claus (Ind.). They also pick up Barber (Ida.), Baker (Ore.), Doctor (Ga.), Farmer (Ohio), Granger (Ind.), Lawyer (Va.), Miner (Mont.), Painter (Va.), Printer (Ky.), Shoemaker (N. Mex.), Singer (La.), Showman (Md.) and Bankers (Mich.).

The American roads extend from East (Tex.) to West (Iowa), and North (Va.) to South (Ohio), over Hill (N. H.) and Dale (Pa.) and Mountain (Wis.) and Rivers (Iowa). They bring Trade (Ala.), Commerce (Ga.), Industry (Ill.), Enterprise (Pa.), as well as New Enterprise (Pa.), Progress (N. M.), Opportunity (Neb.), Confidence (W. Va.) to Boom (Mich.), Prosperity (Mo.) and Goodyear (Ariz.) They continue to operate through Poverty (Ky.) and Hard Times (La.), Puryear (Tenn.) and Panic (Pa.).

The iron rails connect Mansion (N. C.) and Castle (Pa.) with Cottage (Ohio), Homes (N. D.) and Home Sweet Home (Ore.). The School (Va.), College (Ga.), University (Minn.) and the Campus (Ill.) are all available by railroads, as is Library (Pa.) and Church (Iowa). A trip to Jerusalem (Ohio) and Bethlehem (Pa.), and even the Promised Land (La.), are possible without leaving the United States. The roads bring us Health (Ark.) and Life (Tenn.), Golf (Ill.) and Hunting (Wis.), Sun (Miss.) and Moon (S. D.), Rainbow (Utah) and Cloud (Ohio), Poe (Ind.) and Shakespear (Ky.), Beauty (Ky.) and Surprise (N. Y.); Canary (Ore.) or Parrott (Me.), Book (Ohio) and Magazine (Ala.), Scipio (Ore.) and Hannibal (Mo.) We can pick out Suit or Coats or Vests (N. C.), Fedora (S. D.) and Derby (Nev.), or Mink Fur (La.), Plush (Ore.), Satin (Tex.), Lisle (Ill.) and Calico (N. C.). Shop around for Fish (Ga.), Oyster (Va.) and Turtle (Tex.); Carnation (Wash.), Tulip (Ga.) or Pansy (Miss.); Tea (S. D.), Cocoa (Fla.), and Coffee (Calif.); Toy (Ky.), Gift (Tenn.), Valentine (Neb.) and Fireworks (Ill.); for Diamond (Ill.), Cameo (Colo.), Opal (S. D.), Emerald (Neb.), Sapphire (N. C.), Ruby (S. C.) or Pearl (Wash.). If you are looking for Money you can find it in Missisippi, Cash is in South Dakota, Coin in Iowa and a Goldfield in Nevada.

And so it continues, the trains speeding ever onward, contacting towns with names that have much to offer in more ways than one.

Deadwood, on C&NW's line through South Dakota's Black Hills



Had Your Ton-Miles Today?

Last year the railroads moved more tons of freight more miles than ever before in time of peace.

They hauled enough tons enough miles, in fact, to average twelve ton-miles of transportation service every day in the year for every man, woman, and child in the country.

That meant loading and moving more carloads of grain, more cars of coal than ever before — and more cars of all sorts than in any of the war years, even though there were fewer cars available.

With the cooperation of shippers, the railroads are getting more service than ever before out of each freight car they have.

At the same time they are buying and building all the freight cars for which materials can be obtained. And they will continue to do so until the car supply is adequate to meet the needs of the nation with even greater efficiency and economy.

These new cars—and the locomotives, the improvements to track and signals and shops and all the rest of the railroad plant — call for an investment of more than a billion dollars a year.

That's one reason why railroad rates have to be enough so that railroad earnings will be adequate to attract investment dollars. For the railroads of *tomorrow,* and the service you will get from them, depend upon earnings *today.*

Association of American Railroads

WASHINGTON 6, D. C.

Sunnyside Yard

The World's Largest Passenger Car Yard Is Situated on an Island, Yet It Services Approximately Nine Hundred Cars Every Twenty-four Hours

HOLLYWOOD copywriters could have a field-day advertising the Pennsylvania Railroad's Sunnyside Yard. Gigantic—super-colossal—busiest; they could pull out all the stops and heave on the adjectives like a green fireman spreading coal with a big scoop. When describing Sunnyside, they'd have the advantage of being justified, as well as "sincere" hucksters . . . because the Pennsylvania's eastern passenger-car classification and service yard *is* the biggest in the world, and they've got a two-hundred-foot sign up in the air to tell you so!

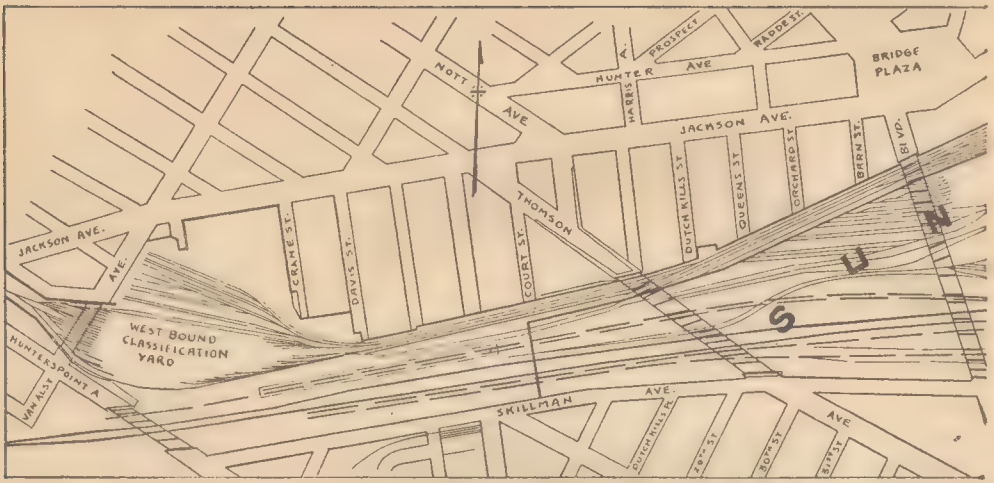
In three full shifts around the clock, Sunnyside's horde of employes replenish, service and dispatch passenger trains to the busiest station

Sprawled across 73 acres of Long Island, Sunnyside's 99 tracks would stretch 53 miles if laid end to end

By WILLIAM L. ROHDE

In the biggest city in the world . . . yet they are located on a nearby island. The yard is part of the railroad that handles the largest concentration of traffic in the world, although actually it is closer to the New York Central's Grand Central Station than to Pennsylvania Station or the Pennsy's main line. In spite of this, it has absolutely no trackage to the Grand Central Terminal, though the Hell Gate Bridge route—which passes through Sunnyside—does enable both New York stations to serve New England and the East.

Long-suffering passengers *through* New York, still have to make an awkward cross-city transfer if their trains to the New England area leave from Grand Central; yet the cars in which they arrived will be taken far past Grand Central, on their journey to Sunnyside Yard for servicing! The answer? Of course there is one . . . but we're talking about Sunnyside Yard, the queen of coach and Pullman replenishers!



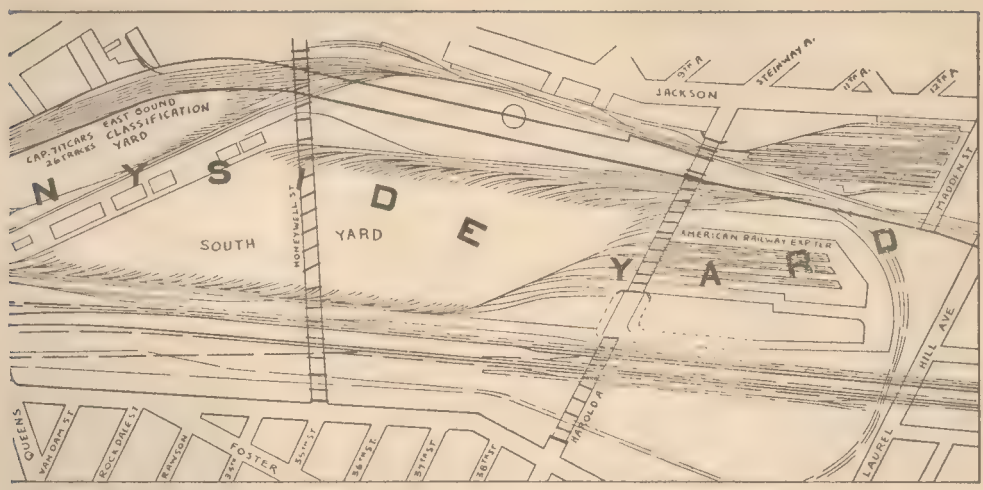
When an eighteen-car train from the west or south approaches New York—sometimes racing along the four-track main line at eighty miles an hour, fifty seconds between it and trains to the front and rear—it swings north from Newark, New Jersey, away from the old ferry transfers on the Hudson River. Two miles from the Hudson River, in Bergen, New Jersey, the smooth-running electric motors roll their string of varnish gently into the ground, into the beginning of the rock cuts that soon become tunnels under the cities of Union City and Weehawken.

The traffic levers at Portal and Tower A lock up the route through the double-tracked tunnel under the Hudson, and the train passes beneath the freight lines and yards of the New York Central and the Erie. After crossing under the river, it rolls into the Pennsylvania Station, almost in the center of narrow Manhattan Island.

Here, the passengers are quickly absorbed into the huge, throbbing community that is Penn Station. Escalators carry them up two levels to the cab ranks or towards any of the four, four-tracked subways between Sixth and Eighth avenues. The automatic lifts drain off mail and baggage. Then the empty, littered train follows signal lights beckoning eastward and on through another tunnel under the East River.

As the big motors drone up into daylight on Long Island, they are paced and passed by scurrying electric passenger trains of the Long Island Rail Road. The train is headed due east and cuts under a Long Island freight overpass, elevated lines, and three automobile causeways. These highways are located at wide intervals to carry local street traffic over Sunnyside Yard, the freight yards nearby and the main railroad arteries which sidetrack Sunnyside and extend for miles on to Hell Gate Bridge, or fan out to service Long Island travelers.

Now the electric hogs cease to gobble at the 11,000 volts overhead. The train makes a gentle curve to the right and begins rounding the long loop which will pass under the main lines and bend to the left past the east end of the passenger yard. It knifes between the Long Island's Harold Avenue yard—one of three freight yards which huddle about

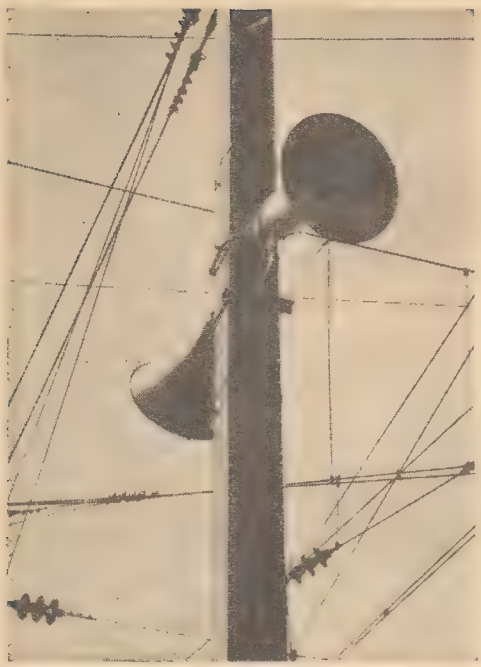


Simplified track layout of "the world's largest passenger car yard." Traffic entering at left gets signals from four towers controlling all movement into and within Sunnyside. The use of a wide loop avoids the need for turntables

Sunnyside—and is headed west at the completion of the big loop. Then into home port, with seventy tracks to choose from!

The yardmaster will do the choosing, jawing constantly into the telephones and microphones which carry his commands to every part of the big garden.

Below. Canadian National boxcar bound for the hump under its own steam bypasses rows of idle juice jacks. Storage and service tracks for the electrics are adjoining the enginehouse



Loudspeakers work 24-hour shifts. They connect the yardmaster's office with every part of the garden

"Put 'er in on nine cut off an' pull eight for six an' hold the baggage an' combine 'till 'ey see about the Sioux City an' the sleeper Utah . . ."

F and H towers have watched the train enter the yard. Now R tower will operate the admission switch and signals, and when the head end is worked, Q tower at the west end of the yard will handle the moves.

The electric motors are soon on their way to the engine service tracks on the north side of the yards, and a stubby little juice switcher is working the train with spinning wheels. The consist is quickly broken up into its proper slots, assuming that our train is not one that receives a lightning cleanup and is off again with the same makeup, and that condition and repair reports are already being assembled. Express cars go to the big Railway Express Company's nearby yard, where merchandise will be unloaded at the firm's huge warehouse. Railroad coaches and equipment move to spots where eager-beaver service crews are ready to swarm aboard. And Pullmans stop at the west end of the yard, where the Pullman Company has its own army of workers.

Some trains are completely rearranged, many continue with the same consist as soon as serviced, while others lose or add only a few cars or set out a bad-order car. But in any case, before the tail-end is clear of the loop, another motor is snaking its drag into sight and demanding a route from R tower; and if you look east towards the city, there's another one coming out of the tunnel. They roll towards Sunnyside like Sunday traffic on Route 1, with their untidy cars and empty kitchens and soiled linen in the sleepers. And the yardmasters talk and talk and worry and wonder, fitting the pieces of the puzzle into their proper places; and with each trick they draw closer to the day when the men in the white coats will call for them.

THE belt-line system of train reservicing in the New York area is comparatively new. If you told any of the oldtimers who rode the trains in days when ferryboats completed every journey to the Empire City, that some day they could ride right into Manhattan on a train, they'd probably have said,

"Well, mebbe, but it'll take an awful big bridge or tunnel to do it. Mebbe they can't do it."

Yet it was done. Not only do the trains dive under one river to get to the richest island on earth, but they crawl under another one to reach another island—terminal yard. This

tunnel comprises thirteen miles under earth, rock and water. It is certainly one of the most valuable subterranean links in the world.

The first definite reference to the construction of the New York Tunnel Extension and Station—as the project was officially labeled—appeared in the annual report for 1901 of the Pennsylvania Railroad Company. The road paid six percent dividends that year, and continued to return six percent or better until 1921. Yet that was not surprising to Pennsy stockholders, however; this volume-traffic road issued ten percent interest on its stocks back in the 1860s and '70s.

The 1901 report states that the management felt its interests, and the public's convenience, required the extension of the Pennsylvania Railroad System into and through New York and the establishment of a centrally-located passenger station in the city. The erection of a bridge was ruled out as too costly, after other carriers whose main lines terminated in Hudson (or North) River ferries declined to enter the project. As things turned out, this was a grave mistake on their part, for their loss of traffic to the Pennsylvania began just as soon as the tunnels were completed.

In searching for a method of reaching New York, Pennsylvania officialdom referred to a complete report which had been compiled in 1892 by Samuel Rea, then Assistant to Pennsy President Roberts. Rea boiled the situation down to five plans. One called for an underground rapid transit system—similar to England's City & South London Railway—connecting Jersey City Station with New York and Brooklyn. Another suggested using the partially-completed tube at the south end of the island, through which trains could be hauled by cable after cutting off

Keystoned switcher 5696 waits upon the plush coach trade: the Seaboard's Florida streamliners. The 200-foot sign boast in the rear is strictly for outsiders; rail officials need only Sunnyside's figures—27,276 car departures last August

Crewman checks with headquarters. The blackboard behind registers up to 60 trains "in and out" of Sunnyside. Varnish is generally spotted within 15 minutes of its departure from Penn Station; about 4 hours before the advertised card. trains are reassembled. *Below*, Wanted: no hotbox. A journal gets a thorough going over

the steam power in New Jersey (now Hudson and Manhattan Tubes).

The other three solutions offered a combination of bridges and rerouting by way of Staten Island; Rea himself covered the double-tunnel plan which was finally adopted. However, at the time of the report, Rea apparently was finding it difficult to decide just which system would be the best.

Penny President Cassatt examined the Orleans Railway Extension in Paris, which was nearing completion and operated trains by electric power. He agreed that the most practical method of reaching the metropolis appeared to be by a bore, plus electricity; it would provide trains from the west with an entrance to a New York Terminal, by underpassing the Hudson River, and then the tracks would continue under the East River to the service yards and connections for traffic through to New England and Long Island. While the boys playing baseball over in Queens didn't know it, their sandy playground was well on its way to becoming the largest passenger-car yard in the world.

By 1904 the land in Long Island had been purchased, as well as property in New Jersey and

Rolling westward through Long Island City, a Seaboard speedster prepares to dig under the East River via a concrete-lined system of tunnels constructed by the Pennsy nearly forty years ago

Photo courtesy of Pennsylvania Railroad

23,100 horsepower, ready to back onto 6,000 collective tons of Pullmans and whisk them under two great rivers to the Jersey mainland

along the projected route across Manhattan Island. Tunnel shafts were started, and construction of the Pennsylvania Station got under way. Legal, engineering, and municipal questions delayed the construction of Sunnyside Yard itself until June, 1907. At this time an agreement was reached with the City of New York, providing for the relocation of certain streets and the construction of elevated highways across the yard to eliminate grade crossings.

Sunnyside Yard was designed on the drafting boards to cover 173 acres: 1,550 feet wide and over a mile long. It would contain 53 miles of track and hold 1,400 cars—and all this without the additions which later years were to bring.

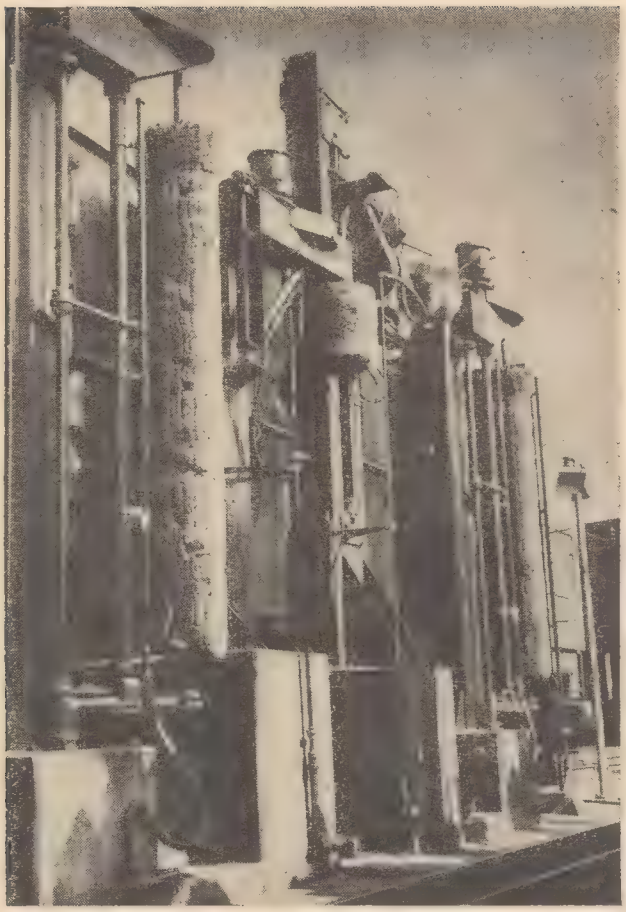
The construction of the yard and approaches was contracted for by the Degnon Realty and Terminal Improvement Company, the Naughton Company and Arthur McMullen. And on September 8, 1910, four single-track, cast-iron, reinforced concrete-lined tunnels connected Long Island from the west tip of the nearly-completed Sunnyside to Pennsylvania Station. Trackage rights were granted to the Long Island Rail Road by the Pennsylvania Railroad Company and the Pennsylvania Tunnel & Terminal Railroad Company. "Granted" perhaps is a misnomer, though, for the Long Island has staggered under the load of this heavy debt ever since.

SUNNYSIDE, too, has been carrying a load, but it is a creative, not a regressive, load and the burden is not on paper or in fancy bookkeeping. Sunnyside's responsibility is the mass of passenger trains which spew from the East River tunnels in a never-ending parade. Night and day, and especially on weekends and holidays when other workers are resting, the Sunnyside army invades every incoming train to clean, repair and make it ready for the road.

On the north side of the garden, an enginehouse serves all classes of PRR and LIRR electric motive power. But although most locomotives in and out of Sunnyside are juice hogs, a steam enthusiast can see coalburners working there and on the maze of tracks that surround the passenger yard. The hump for the Long Island's Long Island City yard takes off to the right beside the engine service tracks, with the brakemen waving to the hostlers as they top the cars and ride them down.

Just northeast of the engine inspection tracks, automatic sand conveyor and turntable is the new semi-automatic locomotive washer, standing almost in the shadow of the 39th Street highway bridge. Designed and built by the Whiting Corporation of Harvey, Ill., in cooperation with the Pennsy Motive Power Department, the new machine has just been erected by the Sunnyside Master Mechanic's crews. It is a considerable improvement over the simpler locomotive washer built at the other end of Sunnyside in June, 1944.

The new tub-and-shower for the streamlined, dark-green and gold passenger train motors is three hundred feet in length, and forms a gauntlet fifteen feet high on each side of its track. Motors reach it after they pass through the sandhouse, enginehouse, and inspection pit, the juicers from the Washington, Harrisburg, Philadelphia and South Amboy (N.J.) runs being sent to the cleaners most frequently. The washer is capable of scrubbing, rinsing and polishing one hundred en-



Sunnyside's locomotive "laundrette," despite its Rube Goldberg appearance, acts like a car-cleaner's dream. Horizontal and vertical brushes rub and polish the engine's smooth surface, while jets of steam and hot water scrub down the wheels, journals, springs and underframe. The whole bath, however, requires only 15 minutes. *Opposite*, the gauntlet of the tub-and-shower, 300 feet long by 15 feet high

gines in a 24-hour day, hauling one locomotive through the wet slot every fifteen minutes. The job done by hand would require two hours and fifty-five minutes, and the brass hats are convinced that the device cleans the power far better and cheaper. Add to this its faculty for keeping running gear in better condition and you know its worth.

The mechanical locomotive laundry is the answer to a Fuller Brushman's dream. Its big horizontal and vertical brushes are so placed that they rub and polish every angle of the smoothly-welded juice burners. Revolving pinwheel sprays hurl jets of steam and hot water against the grease-stained wheels, the journals, springs, and underframes. Overseeing the job is a crew of only four men: a hostler to bring the hogs up and take them away; an operator in the machine control booth; and two laborers who wash the engine behind the ears where the automatic brushes cannot reach.

Since you cannot have an 11,000-volt line running through a place where water is to be splashed about, a three ton steel barney is used to haul the locomotives through their bath, very similar to the Jersey Central's cable-tows at Ashley Planes. The barney car—or pig—comes up from its hole between the rails on its own narrow-gage tracks, and then bumps against the locomotive's coupler and pushes the motor through the 300-foot machines. Then the barney is hauled back by its continuous cable and ducks beneath the tracks to wait for another customer.

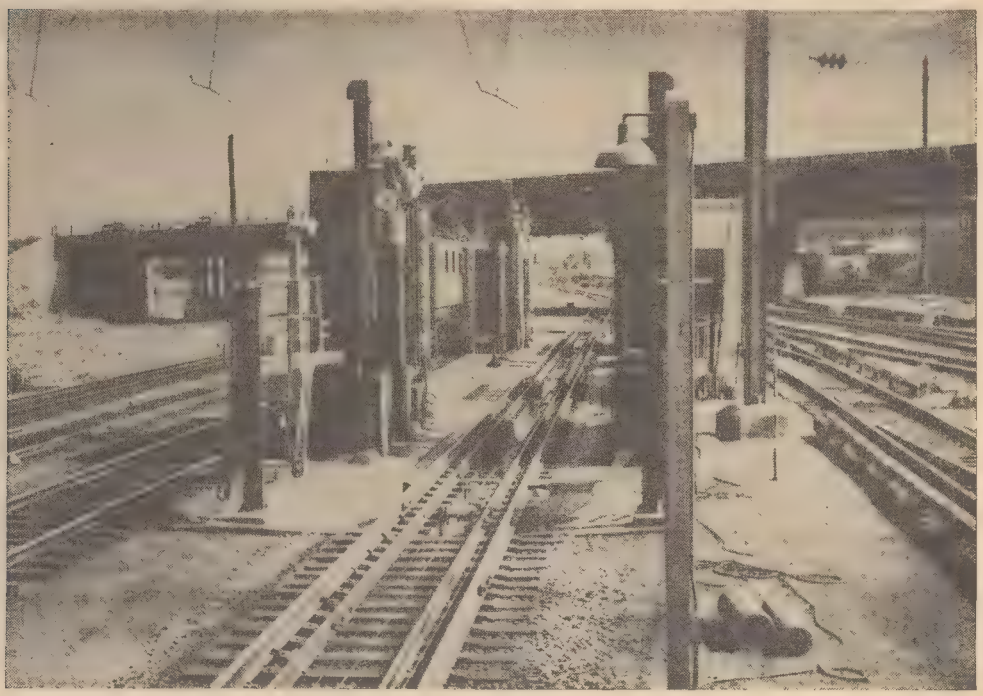
There are ten stages to the washer's operation. The motor arrives and is spotted just east of the barney's hose with pantographs down. Then the barney comes out against rear coupler as four platforms swing across the tracks around the front

and rear of the motor, to allow the laborers to clean headlamps and crevices with short-handled brushes. Next the winch pulls the barney and motor past vertical pipes which spray a solution of oxalic acid and then cold water on the motor.

At this point six large brushes swing into action. They scrub dirt and oil from the engine with long bristles of Tampico straw. The engine reaches the midway control house and as the forward drivers pass a treadle, four rotary washers pinwheel steam and hot water at the underframe and wheels. When the rear wheels leave this treadle, the rotary washers are shut off and vertical cold-water sprays envelop the engine to wash off the acids. Next eight more brushes spin against the motor to polish it; and all is not done yet. A final spray of cold water is delivered with the last rank of brushes; the barney gives the motor enough of a shove to push it out into the area of the overhead wires; and there the hostler raises the pantograph, heading the motor for the storage track as the barney is towed back to its lair.

WITH the success of the locomotive washer, it would seem that Sunnyside's next improvement might be the longest and largest passenger coach and Pullman laundry in the country: a system of trackside jets and brushes designed to flush off an eighteen-car train in ten or fifteen minutes. At present, the varnish jobs are given baths by crews of booted men with long brushes and hoses; each car gets individual attention.

The running gear is worked over and inspected by men who wear the implements of their trade in special belts, like telephone linemen. You can tell what gang a man belongs to by the tools sticking out of his belt. And when they're all through, the car inspectors' reports run like this:



"D78-7988-AC repairs (Freon strainer) Broken diaphragm: Sleeper Clover Prairie — Broken elliptical spring #9-11; M706554 Ventilator leaks very bad: D784417 Hotbox #6 —1 gear box and drive shaft—4-1" bolts missing" . . . on and on in a never-ending list. With management trying to curtail employes and at the same time using equipment that in many cases has seen its best days, you can understand the harassed looks that many minor yard officials have today.

Solarium end of *Trail Blazer's* observation car is washed by hand. Like locomotive front, it can't be reached by machine

Up in the big brick building that houses the Pullman Company's offices for its largest service yard in the country, there are tired looks also. An attempt is being made to cut employment back to the 1941 level and any slash in personnel is bound to be felt when you service three hundred fifty cars a day. That means linen, food and a thousand incidentals, as well as checking the air-conditioning equipment and the furniture, carpets and plumbing. Everyone realizes that labor costs are up, yet there is no doubt that there is also a limit to the amount of work any one man can do.

The Pullman warehouse at Sunnyside does not stock the largest volume of goods of any Pullman commissary; but it does have the greatest variety. Besides the number of products contained, its storerooms have to dish out large amounts, since soap, for example, is gaged at 40,000 cakes a month. From the 8,000 different items stocked for Pullman maintenance, the parade of cars will monthly draw 12,000 boxes of matches; 6,000 large and 9,000 small packets of toilet tissue; 4,000 packages of Scott towels; 4,500 cartons of drinking cups; 5,000 cartons of Dixie cups; and every month 25,000 items—soap, towels, and so forth—will be required to supply those carried away by Pullman passengers. One official said, "We could outfit New York in twenty years, if we had all the stuff stolen."

The Pennsylvania Railroad has its own food and linen supply departments, separate from the Pullman Company's. This has proved very convenient in emergencies, since the two organizations often swap supplies to cover each other's shortages. When that happens, the goods are billed to the borrower, not returned, to make easier bookkeeping.

The removal of many of the direct current live-rails a few years ago remains the biggest event in the yard's

history, according to a poll of the men working within Sunnyside. Every oldtimer has dozens of stories about workers and trespassers who were killed or badly burned by the DC voltage. The accidents still happen in portions of the yard that have third rails and also once in awhile when fate connects a human being with the AC catenaries. But the fatality rate has dropped.

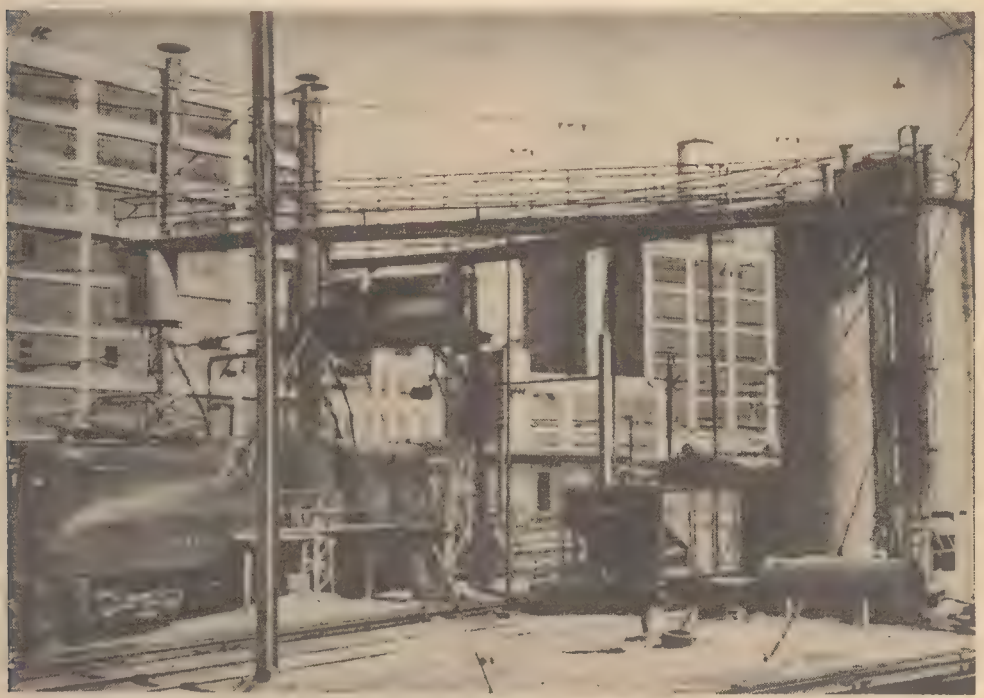
Up to a decade ago, the employes at Sunnyside were treated to occasional safety parades—complete with bands and speakers—to remind them that they were working around live juice. In those days every man in the yards had to attend the safety courses. The road was making every effort to remind its crews that death or injury was always just a few inches away.

In some of the switch shanties, before the removal of the third rails, the floors would be slightly charged with electric current in wet weather. Only enough juice to tingle the feet, and make the floor snap and crackle. The switchmen bade good-by to the third rails with a cheer.

One repair gang that is doing plenty of business these days is the carpet crew. They are the men who inspect, repair or replace the thick green, red, or brown carpeting on the floors of Pullman diners and sleepers. The carpeting was scarce during the war; but now they're catching up on the replacements.

The carpets are cut and edged to size on a huge Singer Sewing Machine that runs the length of the long carpet room in the Pullman building. Then, tied into rolls, they are delivered to the cars ready to unroll and fasten down. The old carpets

Pennsy's mechanical conveyor siphons sand from a hopper up through the tank and directly into Motor 4869



are rolled up and wrapped for salvage. Already the storage rooms are filled to the roof, and overflowing.

Both the Pennsylvania and the Pullman Company maintain schools for maintenance and traveling personnel, turning out trained waiters and cooks about every three months.

Monthly Car Departures From Sunnyside Yard (Aug. 1947)

	Pullman	Coach and Combine	Other	Total
PRR	6,595	10,633	6,232	23,460
NH	290	580	262	1,132
LV	157	874	574	1,605
LI	18	369	692	1,079
	7,060	12,456	7,760	27,276

SOME of the cars serviced are scheduled for the new cross-country runs, and the car and crew feel as though they've been away on a long voyage. On the Mexico City run, one Pullman actually does reach foreign soil. The men on this car leave it at Laredo, Texas, where a Mexican crew handles the portion of the trip to and from Mexico City.

A glance at the chart above will show the departures from Sunnyside, listed by the type of car and railroad over which it operated during a recent month. Considering the Pennsylvania's operation, an additional 1,595 Pullmans and 4,399 coaches were dispatched in the same month if we count the Long Island Wheel Spur Yard—built during the war to handle Sunnyside's overflow.

Checking the Sunnyside's monthly figures on a few special items, we see that eighteen parlor cars went out to the Long Island Rail Road. You'll have a hard time finding those runs in your timetable, but they are covered by the special instructions. They travel the Greenport and Montauk lines during the summer for the estate-trade that hasn't yet bought private airplanes for commuting purposes.

Sunnyside fed ninety-four parlor cars to the Lehigh Valley and 1703 to the Pennsylvania in August 1947. Turning to baggage cars, we see that the Long Island received 536, the Lehigh Valley 121, and the Pennsylvania 2064 from Sunnyside.

A breakdown of railroads traveled by cars out of the big classification yard during the month would include most of the large systems in the country, as well as some that would call for investigation in the *Official Guide*. Among the most popular and impressive trains in the yard, of course, are the shiny metal streamliners that cover the Florida runs—the Atlantic Coast Line, Seaboard Air Line and Florida East Coast speedsters. They are fast and comfortable, and the coach seats, reasonable. Yet they are feeling the bitter slash of airline competition very keenly.

Many workers at Sunnyside belong to the United Railroad Workers of America, CIO, in addition to the crafts controlled by the old-line AF of L locals. There are a great many Negro men and women on the yard's large payroll, working in all trades. A spot survey showed no friction or disagreements among the various groups of employes. Each is doing its own thinking, as well as doing the best job it can; and the

Pullman services 350 cars daily at Sunnyside, which means constant activity at the west end of the yard. Diners get first call on Tracks 1 through 9. While Pullman's larder at Sunnyside offers the greatest variety of products, here as everywhere else ice is a major demand; motors shuttle between tracks making deliveries

prompt, intelligent answers to any question posed to the personnel in Sunnyside indicate that the men are well-briefed in everything concerning their jobs. First and foremost, they are railroad people.

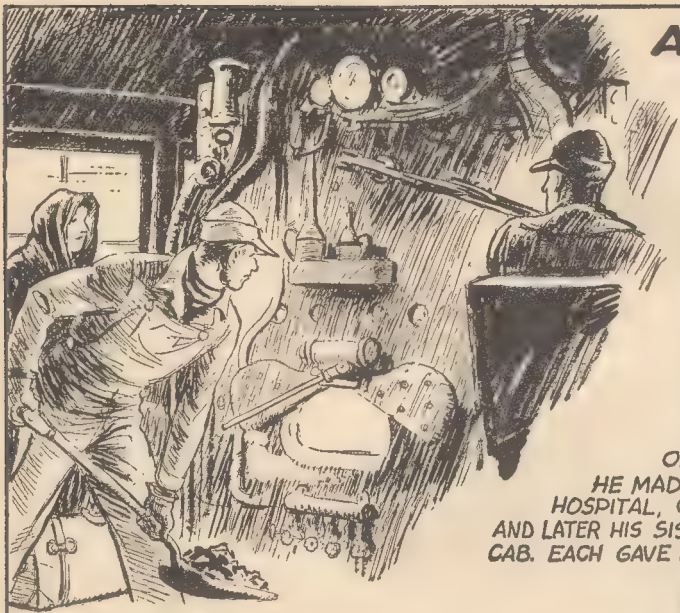
The beanery at Sunnyside is manned by cheerful Greeks who take the usual amount of razzing from the crews, although the food is solid and prices are moderate. The restaurant is underneath the yardmaster's office . . . but you'll always find him out in the yard. Right this minute, trains are rounding the loop and heading west into Sunnyside. The loudspeakers are blaring and the floodlights are shining, if it is night. A yardmaster is trying to talk as fast as he is thinking into a telephone—and remarkably enough, his orders come out straight.

"Awright take her up fourteen an' put two baggage on 'er from twenyseven rideaway an' then when hunnertsevenyeight hits take four offa."

And the army of workers is fixing the cars and cleaning them up . . . getting the varnish and the plush back on the road . . . always in a hurry . . . but somehow always ready.

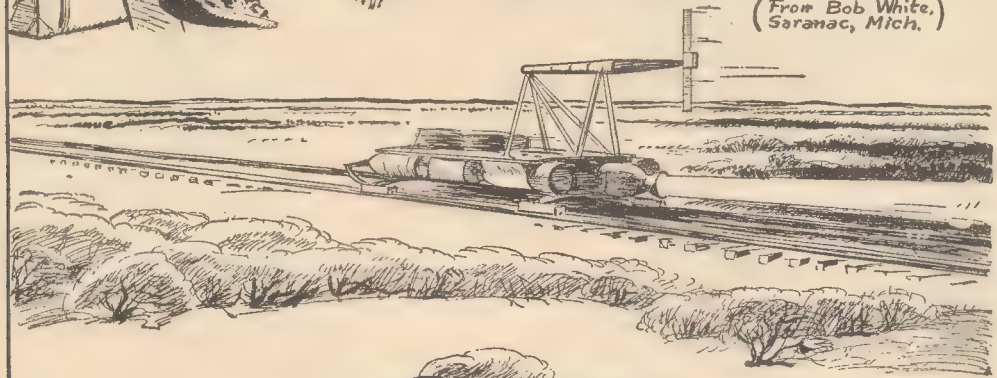
ALONG THE IRON PIKE

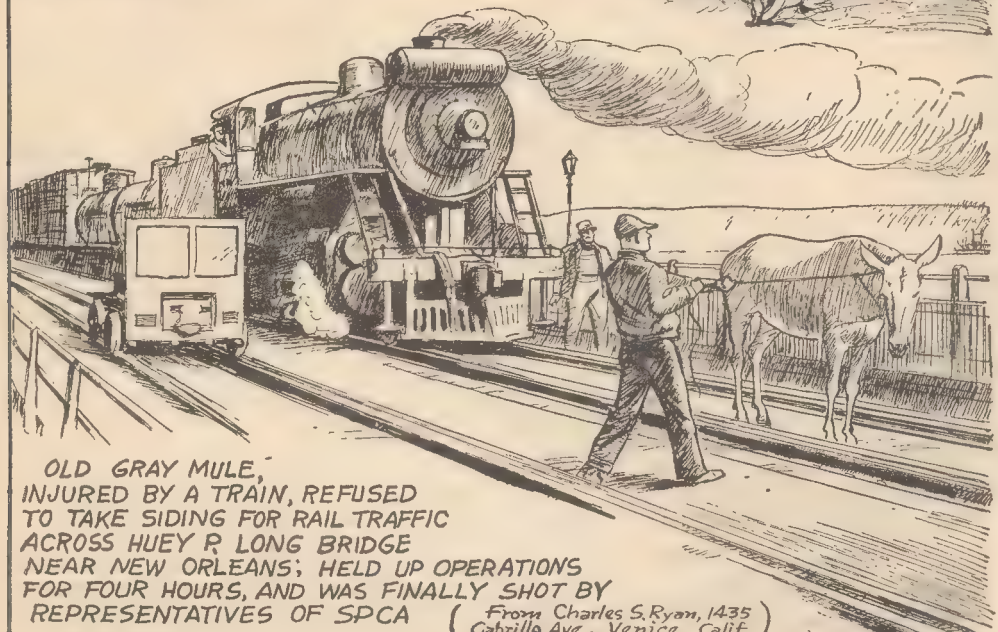
by JOE EASLEY



"STORK ROUTE" IS WHAT ENGINEER VERNON RANSIER CALLS FORTY-MILE RUN BETWEEN WHITE SULPHUR SPRINGS AND TOWNSEND, MONT., OVER TRACKS OF THE WHITE SULPHUR SPRINGS & YELLOWSTONE PARK, THE MILWAUKEE AND THE NORTHERN PACIFIC. ONE DAY LAST JANUARY HE MADE TWO TRIPS TO TOWNSEND HOSPITAL, CARRYING FIRST HIS WIFE AND LATER HIS SISTER-IN-LAW IN LOCOMOTIVE CAB. EACH GAVE BIRTH TO A GIRL

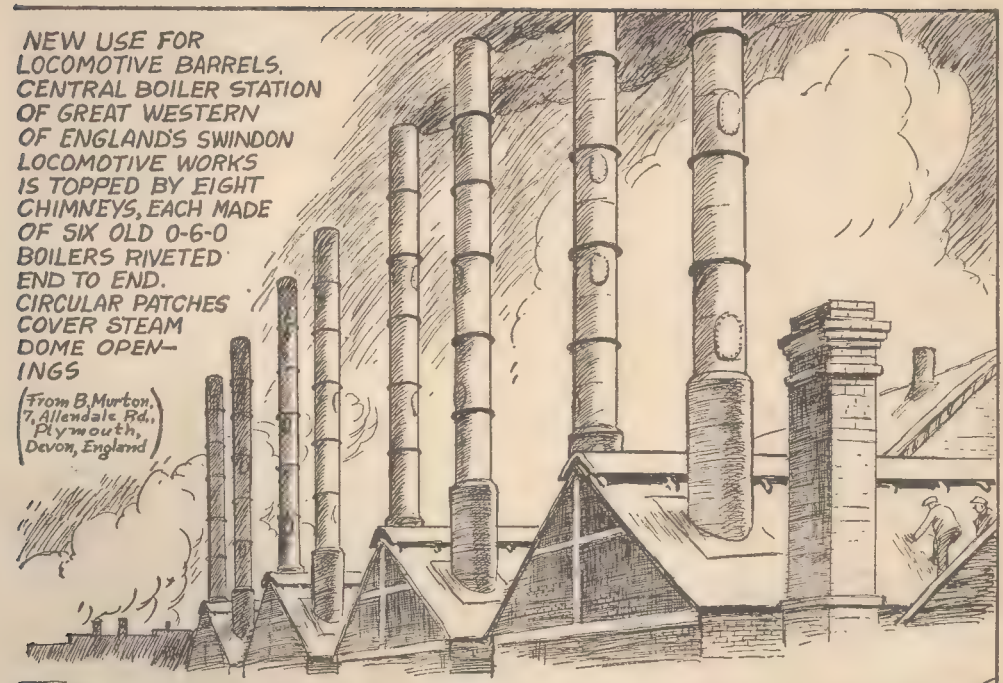
(From Bob White, Saranac, Mich.)





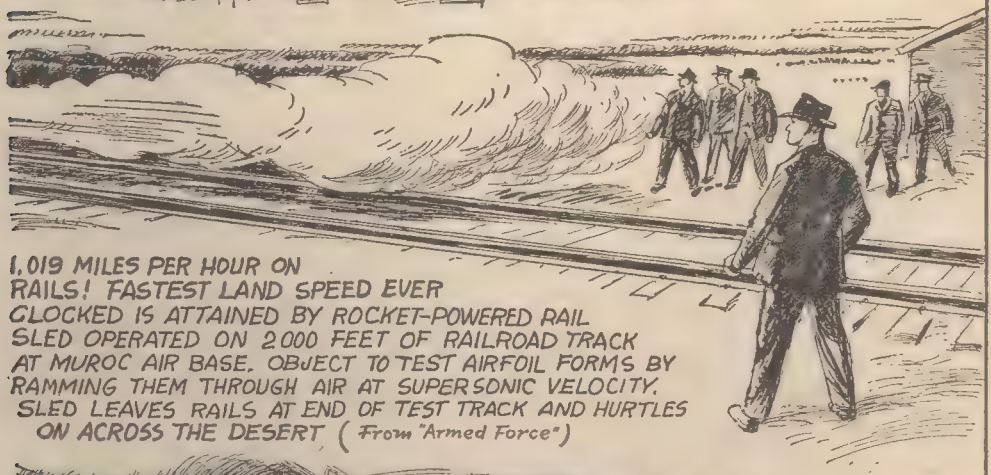
OLD GRAY MULE, INJURED BY A TRAIN, REFUSED TO TAKE SIDING FOR RAIL TRAFFIC ACROSS HUEY P. LONG BRIDGE NEAR NEW ORLEANS; HELD UP OPERATIONS FOR FOUR HOURS, AND WAS FINALLY SHOT BY REPRESENTATIVES OF SPCA

(From Charles S. Ryan, 1435 Cabrillo Ave., Venice Calif.)

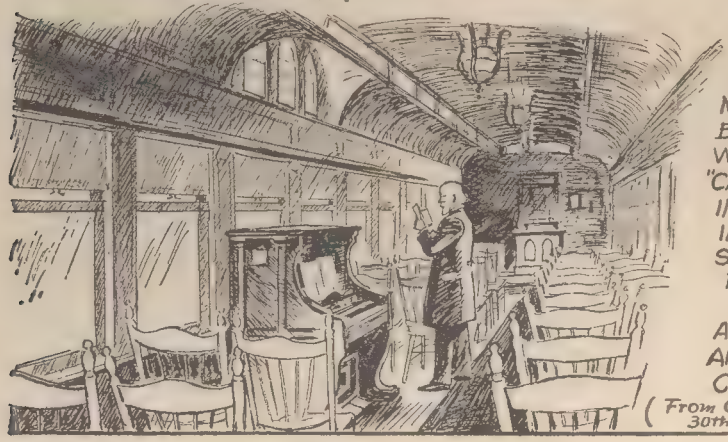


NEW USE FOR LOCOMOTIVE BARRELS. CENTRAL BOILER STATION OF GREAT WESTERN OF ENGLAND'S SWINDON LOCOMOTIVE WORKS IS TOPPED BY EIGHT CHIMNEYS, EACH MADE OF SIX OLD 0-6-0 BOILERS RIVETED END TO END. CIRCULAR PATCHES COVER STEAM DOME OPENINGS

(From B. Murton, 7, Allendale Rd., Plymouth, Devon, England)



1,019 MILES PER HOUR ON RAILS! FASTEST LAND SPEED EVER CLOCKED IS ATTAINED BY ROCKET-POWERED RAIL SLED OPERATED ON 2000 FEET OF RAILROAD TRACK AT MUROC AIR BASE. OBJECT TO TEST AIRFOIL FORMS BY RAMMING THEM THROUGH AIR AT SUPERSONIC VELOCITY. SLED LEAVES RAILS AT END OF TEST TRACK AND HURTLES ON ACROSS THE DESERT (From "Armed Force")



NORTH DAKOTA'S FIRST EPISCOPAL BISHOP, W.D. WALKER, HAD A "CATHEDRAL CAR" BUILT IN PITTSBURGH, PA., IN 1890, TO BRING SERVICES TO ISOLATED PRAIRIE PARISHES. IT SEATED 92; HAD AN ALTAR, REED ORGAN AND STAINED GLASS CLERESTORY WINDOWS

(From C.T. Steeb, No. 9 North 30th St. Billings, Montana)

Scene on Canadian River near Camp 38

Part I

The People, Acting Through Congress, First Set Iron Wheels Rolling on the Long Trek Westward

Railroad Scouts

HAVE you ridden the *Super Chief* west of Albuquerque and gazed fascinated at the moonlit expanse of mountains which swim back from you as clean, smooth Diesel power whisks you through the narrow passes on toward the Pacific? Or did you ever stand on the brick walk at Ash Fork and watch those huge four-unit Diesel hogs lead interminable strings of yellow reefers into town, pause for a moment on the main stem and follow each other in fleets of two or three up the long winding grade toward Williams?

Maybe you've wondered why your luxury liner glides over two-track steel through Albuquerque and Winslow and Ash Fork and Needles instead of seeking some other route. Perhaps you've asked yourself what railroad scout blazed the trail here. You may even have heard that a lieutenant of engineers led a handful

By
E. S. DELLINGER

of men through this wilderness of granite hills, seeking a route for a railway to the Pacific. But the chances are you've never known his name or taken a look at the carefully prepared reports of his expedition which lie unnoticed in libraries.

The Mexican War, the acquisition of a vast unknown southwestern wilderness, gold, the rush of the Forty-niners—had brought the Pacific Coast to the attention of the East. When California was admitted to the Union, it became evident that this great southwestern empire could not be welded into an integrated part of the nation, unless a railroad could be built to furnish rapid transportation and communication.

The project was beyond the scope of private enterprise. Only the federal government had at its command the wealth required to finance the construction of a railroad through two thousand miles of wilderness.

Five possible routes were known to exist. Not one of them had been scientifically scouted for a railroad, though sections of each had been officially explored by Army men or used by immigrants. One led directly west from Lake Superior to Puget Sound. Another crossed the plains through Nebraska, Wyoming and Utah. A third led from Independence, Missouri, through the Middle Rockies. A fourth traced roughly the line of the 35th Parallel of Latitude through Albuquerque, New Mexico. The fifth ran along the southern border.

The route along the 35th Parallel was unquestionably the one most highly favored by the majority in Congress, provided suitable passes could be found through the mountains. It would lead directly west out of Memphis, to some port on the Pacific. Branches fanning out from points along it could be built into St. Louis, Missouri, and into Vicksburg, Mississippi. Over these branches westbound traffic might be funneled into the main stem, and traffic from the east could be drawn off and distributed to its destination.

There were disadvantages. It crossed the mountains at their widest extent. Three great mountain-born rivers—Rio Pecos, Rio Grande and Rio Colorado—slashed squarely across it. Before a grade stake could be driven or a foot of earth turned, Congress must know whether there were passes into and out of these three valleys and through the labyrinth of mountains between the Rio Grande and the Colorado.

In the summer of 1852, Captain Sitgreaves had led an exploring party serviced by pack mules through a part of the route. Indians had attacked him; and his whole party had almost died of thirst in going down from the mountains to the Colorado. Over much of the rest, the foot of white men had never trod. An experienced engineer trained in wilderness surveying was needed to direct the scouting. It was 1800 miles from Fort Smith, Arkansas, to the Pacific. The only military post on the route was Fort Defiance, in the Navajo country west of Albuquerque; and the only white men along it lived in Primitive Spanish settlements in New Mexico.

Lieutenant A. W. Whipple of the Topographical Engineers was chosen for the task. He had taken an active part in the Mexican Boundary survey the year before, and was experienced in desert work. He understood, partially, at least, the language and customs of the southwestern Indians. His orders from the Secretary of War instructed him to select "the most suitable point of departure, continue his reconnaissance along the Canadian, cross the Rio Pecos, turn the mountains east of the Rio Grande and enter the valley of that river near Albuquerque. From thence westward," the order continued, "extensive explorations must determine the most practicable pass for a railway through the Sierra Madre and the mountains west of the Zuni and Moquis countries to the Rio Colorado."

WHIPPLE'S task was far more complex than that of the early trail scout. The railroad scout must express his findings in terms of altitude, of grade per mile in feet, of curvature in radius, of cut balanced against fill, and of tunnels, bridges, and trestles. These findings he must convert finally into cost in dollars per mile. Nothing possible to gage could be left to chance. Every judgment must be verified and checked by the use of precision instruments.

Few of these—transits, levels, barometers both mercury and aneroid, telescopes, sextants and dip circles—were manufactured in America, and the imports from France or England were so few that only a limited number of surplus ones were even owned here. Most of those available for loan or purchase had already been secured for Perry's expedition to Japan, or for the use of Governor Stevens, Captain Gunnison, General John C. Fremont or Captain Parke, each of

Courtesy Santa Fe Railway

Freight Diesel 167 pulls the ***Super Chief*** into Albuquerque, N.M., where servicing crews take over. ***Below,*** Alvarado Hotel as seen from the nationally-known "brick walk" of the Albuquerque station platform. Fred Harvey Indian Museum is at left center with newsstand in lower left corner

whom was scouting another route for the Pacific Railway.

The army supplied Whipple with transits, levels and sextants. He ordered aneroid barometers made in New York and dispatched Lieutenant Ives to El Paso to pick up the astronomical instruments which had been stored there by the Mexican Boundary Commission the year before. Ives was to meet him in Albuquerque when he came through in the fall.

Early in July, Whipple arrived by steamer at Fort Smith, a frontier trading post, where the Indians came to sell furs, food and livestock and to spend the proceeds for sugar, tobacco, coffee, clothing and corn liquor. The fort itself was a sandstone structure on a hill between the town and the "Indian Country" which stretched for eighteen hundred miles west to the Pacific.

While he waited for tents and wagons carried by a steamboat hung up on a sandbar in the Ohio River, Whipple talked to trappers, traders and scouts who claimed to have travelled over the land to the west. He heard disquieting rumors of wild Comanches and Kiowas who roamed the plains along the upper Canadian and struck fiercely at every party, strong or weak, which tried to cross their hunting grounds. He heard of springs dried up by a year of drought, and of rivers which were only threads of sand and alkali woven through desert wastes, and of men who died of thirst along the unfriendly trail.

He had waited vainly two weeks for his own equipment, when borrowing wagons and tents from the Fort he headed into the wilderness on July 14th. His first day was an unlucky one. The survey, directed by Mr. Campbell as railway engineering expert, crossed Poteau Creek and nosed into the bottom between that stream and the Arkansas into which it flows. The wide flood plains at their junction were covered with a dense jungle of thick underbrush and of native trees matted with vines springing profusely from the rich, miry bottoms. Even though they substituted the barometer for the level, using it to determine altitude and elevation. The party's progress was hampered by the thick underbrush, and when night came on, they had covered only five miles. A storm cloud was rising out of the southwest. The survey was still far from Ring's plantation, fixed as the site of their first camp, when they quit work, climbed into an ambulance, and started toward camp.

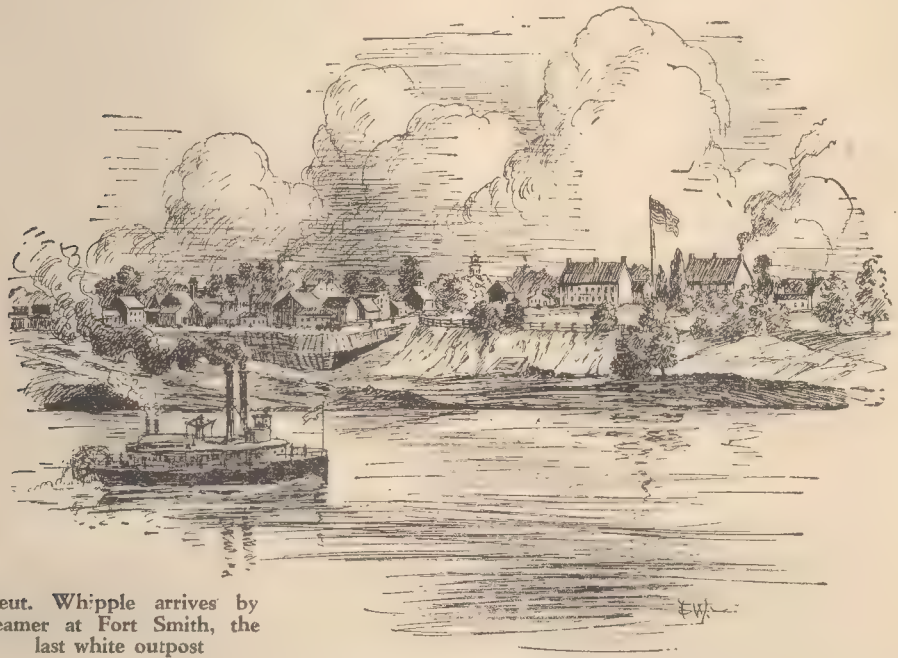
The storm broke. Wind lashed tall oak trees and bent them low. Lightning flashed and thunder blasted the dark, dismal bottoms. The Choctaw road was two muddy ruts winding among the trunks of oak and hickory. The mules, terrified by the crash and peal of thunder, reared and plunged, snapping the tongue out of the wagon.

They stumbled along through ruts and through slimy mud up to their thighs, advancing when the lightning came, stopping when its glare died down. Late at night they arrived tired, wet, cold and hungry at Ring's Plantation. No tents were up, no fires were burning; but the squaw men who ran the plantation had ready a steaming hot supper.

The storm blew itself out. They tried the next morning to continue with their survey but water was everywhere, and they were compelled to lie idle until it soaked away. At the end of four days, they had covered a scant ten miles out of

the total eighteen hundred to go.

They carried the work slowly on to the Choctaw Agency at Scullyville. There, Mr. Whipple received word that his own equipment had at last arrived in Fort Smith. He rode the twenty-three miles back alone to check it out, then accompanied by a military escort under Lieutenant Jones, he returned with it to Scullyville where the great wagons, drawn by army mules, were loaded with food, ammunition, tents, bedding and other supplies. Twelve days later, the expedition rolled slowly out of Scullyville to begin its long journey to the Pacific.



Lieut. Whipple arrives by steamer at Fort Smith, the last white outpost

A DETACHMENT of soldiers led the procession. Behind the escort was the train of many wagons and well over 200 mules. Grazing out to the side were the sheep and cattle driven by herders to furnish fresh meat for the party.

The survey followed the train, in the lead a spring wagon drawn by mules and carrying the delicate instruments. Attached to the rear wheel was an odometer to measure the distance travelled. Behind, came the surveyors with chain and transit, establishing points, lines and transit stations.

Sometimes they followed old trails. Sometimes small parties scouted trails to right or left seeking more suitable routes for the railroad or checking the resources of the country. They took careful notes on the contour of the land and later worked them up into profile drawings. They estimated cuts, fills, curves, bridges, and trestles. They studied coal and timber measure with an eye to fuel or tie and bridge timbers. At night, or on the days when they remained in camp, they arranged their notes for the reports they sent back to Congress.

A few quotations will show the nature of Whipple's record:

"Aug. 3—Camp 9. Our camp being a fine one upon a grassy creek . . . it was thought best to remain here a day and make explorations. Surveyors and reconnoitering parties employed themselves in plotting their notes. Astronomical and meteorological assistants carried on their computations. Another division explored north twelve miles to the Canadian River. . . . The stream at the mouth of Long-Town Creek is about 360 feet broad. Water flows sluggishly, is of whitish color, nearly clear and less than knee deep. In the valley are great numbers of hickory trees, cedars, and oaks. . . ."

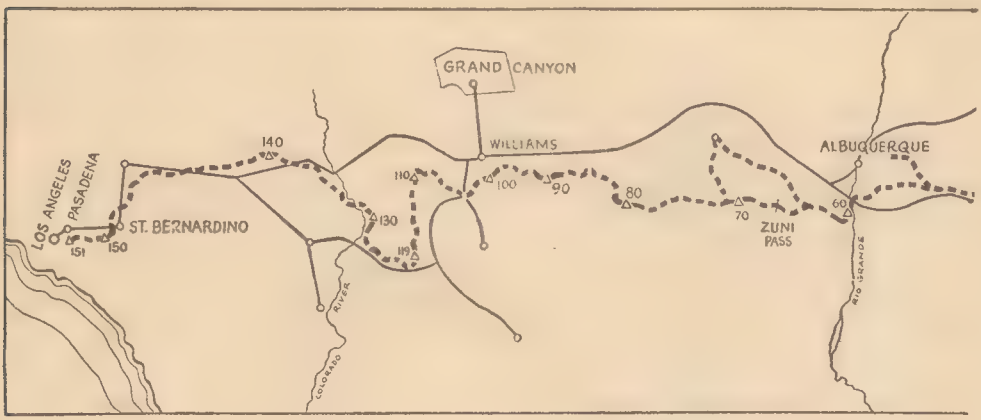
And the following day—"We had tents struck at daybreak . . . the road was exceedingly rough, being crossed by deep gullies worn by rains that washed down from the hills of the Sans Bois upon our left. . . . Two wagons were broken pitching down into one of these hollows. . . .

"Passing the bottom lands of Gaines Creek, the road was one long succession of miry sloughs and muddy pools. Having travelled seventeen and a half miles, we encamped upon La Hondo. The survey made good progress over ground suitable for a railway . . ."

And a day later he writes—"Crossed La Hondo and a quarter mile beyond forded Gaines Creek. Continuing through the forest, we passed a village of Choctaws and camped at a walled spring near the farmhouse of Steven Perry. The country is beautiful, the soil fertile. Where seed is sown it produces a rich harvest. . . .

"From Scullyville the general character of the country near the road is unchanged to Camp 7, consisting of isolated prairies and wooded hills with small creeks and rills among the ravines, about fifty feet in ascent and descent. A few miles south of the road is a more level prairie county with a drainage to the Poteau. Upon this line is the railroad. . . . In the vicinity of Sans Bois Creek are forests of great extent, abounding in hickory, oak and pecan. . . . Ordinarily, wells in this vicinity discover beds of coal two or three feet thick. Besides bituminous coal sufficient for the uses of the railway and for export are sandstones and limestones excellent for bridges."

Interspersed among the serious notes are occasional bits of humorous characterization as when, in speaking of a Shawnee guide who had been



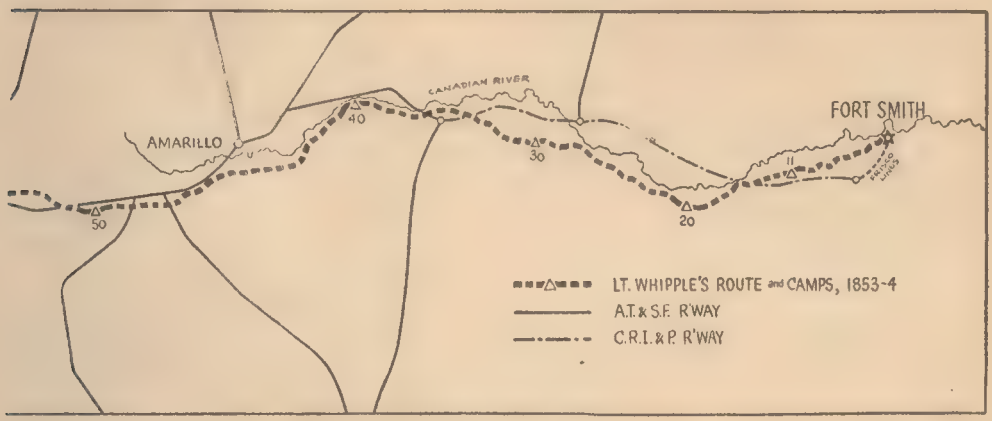
employed to lead them to the Delaware Village beyond, he says: "He seemed to think that the only time when his presence was required in camp was at meal time. . . . He was so dignified and reserved that it was some time before we even knew he could speak English."

Thirty-three days after tying their survey into the flagpole at the fort, they reached Chief Black Beaver's Delaware Settlement, 198 miles west. To this point they had found abundant water, wood for fuel and construction, a land richly underlaid with coal, a region of fertile soil promising rapid agricultural and industrial development. To this point their railroad would be easy to construct, economical to operate, and assured of a lucrative traffic once the land was opened to white settlement.

Ahead the trail was uncertain. Chief Black Beaver's settlement was the last outpost of the civilized tribes. To the west lay the great plains and the thundering herds of wild buffalo hunted by Comanche and Kiowa, tribes wilder than the buffalo.

Of the land out there, even the Delawares knew very little. Black Beaver, one of the few men who had ventured far onto the plains, refused to guide the party. He said he was old. The season had been unusually dry. Springs which in ordinary years furnished water in abundance were now but beds of parched and thirsty sand.

Whipple's dignified Shawnee guide was afraid of the savages who lived beyond the Delaware village. He took his pay and turned back to his native Shawnee hills.



Earlier he'd recommended John Bushman, a Delaware. Bushman agreed to guide the party through—for two dollars and a half a day— but after sleeping over the proposition, he changed his mind. He, too, was afraid of the savages in that wilderness of sand.

"Maybe you no find water," he said. "Maybe Comanches scalp you. Maybe you all die."

He recommended Jesse Chisholm probably the most discreet and reliable of all guides, a white man of means. He owned a store and a ranch and several slaves, captive Mexicans whom he had bought from the Comanches. He had spent years moving over the plains, buying hides and furs from the Comanches and Kiowas, selling them baubles, trinkets, tobacco, calico, and maybe a little

firewater. He knew all their languages and had served as interpreter in the general councils of all the tribes. More subtle than the red men, he was just as anxious to keep his scalp. He declined the offer.

Chisholm then sent word that he would loan the party a slave boy, a lad named Vicente who had been a captive for many years in the Comanche camps. So, with this lad who was an interpreter but no guide, directed by the stars, and guided by the meager reports left by those who claimed to have passed that way, Whipple struck camp on the morning of August 22nd, and the wagons moved out into the plains south of the present site of Oklahoma City. The trek now was into the unknown.

ON THEIR first day out, a scout riding ahead seeking water, saw two Indians setting fire to the prairie. One hid himself in the rank dry grass. The other crossed his arms over his bare, bronzed breast, flung back his head and defiantly stood his ground. The scout riding up inquired why they were firing the prairie. He maintained a stony silence. The scout asked if there was water ahead.

"No water!" the Indian muttered. "You go back!" He pointed dramatically into the east.

But the wagons rolled on. The survey followed them. They camped that night beside a spring in an arroyo where, to protect their train from a possible raid, they burned a circle around the wagons. All night the fire outside their camp site raged on. The flames roared and rolled like billows on a stormy sea. When morning came, they were up and away, moving on into the northwest.

Strange Indians kept riding cautiously up to their train or coming at night into their camp, begging coffee, food, or clothing. They spoke neither English, Spanish nor Comanche. The boy, Vicente, talked to them in the sign language of the plains. They said they were Huecos from the south, from the breaks of the Red River, on a hunting expedition to the Canadian. Asked their number, they answered tersely:

"Plenty!"

Whipple strongly suspected they were up to mischief. He believed they were waiting their chance for a surprise attack intended to stampede the mules, leaving the men afoot to be picked off from ambush. He doubled the camp guard and the men all slept on their arms.

For four days the savages lurked along their trail, hanging on their flanks or to front or rear. Occasionally, the surveyors would see a lone rider sitting like a statue atop some mound. If they attempted to approach him, he would gallop away and disappear in a draw or a clump of timber. When one came into camp, he was presented with gifts and treated royally, but neither gifts nor kind treatment ever won them over.

On the fifth night, the party encamped beside a spring flowing into the Canadian from near the head of a branch of the Washita. The sky was cloudy, with a comet showing when the clouds broke away. The mules pawed and snorted, but the herders held them through the night. In the morning a messenger from the chief came in, scouting to determine the strength of the party. He evidently considered it too strong to be attacked, for the warriors held off. Finally, carrying the usual gifts for himself and his leader, he went away.

The train advanced through rank, dry grass which covered the plains as far as the eye could see. Topping a low ridge five miles from camp, they saw a line of smoke rising up along its crest, and right under the smoke, a line of fire that came leaping over the hill.

In Whipple's own words: "There seemed to be no safety except in flight. The train, therefore, countermarched in double quick time and took refuge behind a watery ravine where the grass was too green to burn freely. Taking advantage of a comparatively bare spot, we fought the flames and made a temporary opening through which the train passed to the black, burned prairie which we then traversed in safety. Mile after mile we trod nothing but cinders. The country became nearly level, and to the edge of the horizon presented a woodless, waterless, desolate field of black ashes.

"Here and there were clumps of withered grass nourishing burning embers. It was a dreary prospect for the mules, and we began to fear lest the Indians had adopted this means of accomplishing our destruction."

But as they rolled on, they found ravines hiding pools of water with green grass growing along their banks. Beside one of these pools, at a point southwest of where Oklahoma City now stands, they pitched their camp. It rained that afternoon. The evening was cold and disagreeable. They needed fire, but the entire camp had to huddle around one lone, dead cottonwood, which scarcely furnished fuel enough for their cooking. They pitched their tents and retired to the warmth of their blankets.

Even this comfort was denied them. A norther came sweeping down, bringing wind, rain and fine hail. The whole camp burst into an hysterical uproar. Some laughed; some shouted; others grabbed mallets and burst out, half-clad, to drive down the tent pegs which had been insecurely set in the haste of making camp. Only a few of the tents stood against the wind. The remainder were blown across wet beds—and there they lay until the cold and dismal dawn brought the shivering men out. As they warmed themselves with the vigorous exercise of breaking camp and getting ready to roll, they learned that the lone Hueco spy who had guided them the previous day, had disappeared. They saw no more of him or his tribesmen.

They were now 266 miles from Fort Smith, following the north side of the Washita Valley, and moving on at the rate of twelve to twenty miles a day over country good for a railroad. As the days followed each other, they saw no Comanches, but thought of them was never out of mind. At Deer Creek they found lodges and the remains of camp fires left by Kickapoos, but the Indians had gone.

A week later, having crossed the divide from the Washita, they followed the Canadian west to the flat-topped Antelope Hills crowned with white sandstone which lie on the Texas boundary. Here they found wild grapes and plums growing in profusion; and in the woods were wild turkeys and deer and antelope. Buffalo sign they also saw. Then, in the late afternoon, the surveying party which had lagged behind the train, saw a lone Indian riding back and forth across their trail.

Vicente, who knew the ways of the plains Indians, said he was a

spy and that probably a band of warriors was hiding behind the hill. After watching the train for a mile or more, the spy wheeled his horse and galloped swiftly away. The survey passed on through a deserted Indian village and came in sight of the forks of the river.

The place was in turmoil. A band of warriors—Kiowas, Vicente said, mounted on beautiful fiery horses, were lined up at the ford. They wore full war paint, gaudy feathers, and silver bracelets. Their bows were already strung.

Vicente quickly tied a white rag to the ramrod of a musket, and waved it as a signal of friendship. Instantly the Indians changed front. The warriors came toward them with a display of rearing charging horses, and conducted them to their village.

The fierce, treacherous-looking old chief called a council. The pipe was passed around while they blew whiffs of smoke toward the sun and the ground. When the smoking was done, the chief said he was a friend to the Americans, that the gray-haired father to the north had treated him well, had given him good gifts and promised that other white men would do likewise.

Lieutenant Whipple explained that the White Father in Washington had sent him on a long journey, and had given him but few gifts, tokens of friendship, to bring to his red brothers. He displayed strings of white and blue glass beads, tobacco and a blanket for each chieftain. The old chief tossed the beads contemptuously aside. The blankets he kept, but he said they were not enough; only when a blanket had been given for each member of his party could he be friends.

The Kiowas, considering themselves supreme rulers of the plains, were evidently trying to exact tribute from every party which passed that way. Whipple had no intention of submitting to the outrage. He looked the chief straight in the eye.

"The White Father in Washington gives only free gifts, he gives nothing under compulsion. If you do not like these gifts," he continued, talking through the interpreter, "then you may return them and we will give you gifts of powder and of lead."

THIS was war talk. The Mexican boy trembled and turned pale when he translated the stern ultimatum. The chief received it with an amazement which changed to indignation and a towering rage. Every white man was alert for treachery or instant attack.

Whatever he may have felt, Lieutenant Whipple showed no signs of fear. "Furthermore, sir," he said, swiftly following up his first threat, "to my camp have come American citizens from the Rio Pecos who came here in peace to trade. They say you have robbed them of their goods. You must compel your men to return at once what you have stolen from them. I have also heard complaints that you have here in your camp slaves stolen from the settlements along the Rio Grande. You must free those captives at once so they can return to their people."

The ire of the old chief cooled. His favorite wife was one of these captives and there were children. From the aggressive, he shifted to the defensive. He said friends should not come into a man's lodge and try to separate a father and husband from his wife and children. He begged for gifts of food for a midnight feast.

Lieutenant Whipple was quick

to take advantage of this change in attitude. He softened enough to present the scalawag with a beef cow, which the warriors proceeded to butcher with many arrows shot from fancy Bois d' Arc bows. The kill ended, they carried their prize into their own camp and made ready for the feast.

There was little sleep in the white men's camp that night. The Kiowa warriors outnumbered them ten to one, and they boasted that there were many more expected in at dawn. At the Indian encampment down by the river, there was racket and turmoil until far into the night. At daybreak a large body of horsemen came splashing across the ford. The Americans prepared for the attack; but the Indian rioters soon settled down to quiet.

Before sunrise, the old chief, playing for sympathy, came leading his little blue-eyed son into camp. One of the Mexican prisoners had already told Whipple that the boy's mother wished to go away with him. While they parleyed, she came dashing up on a fiery pony, which she rode with horsehair bridle and stirrups of buffalo thong. The chief spoke harshly, evidently ordering her to be gone. She gazed longingly back at the Americans as she rode away, followed by her son.

While Lieutenant Whipple and Lieutenant Jones were debating whether or not to risk a crisis by compelling the Indians to release their prisoner and return the stolen goods to the traders, the old chief scurried away to his camp, and within a few minutes had dismantled it. Before the engineers were aware of what was happening his tribe had loaded their belongings onto swift horses and were ready to race away. Their fast mounts could quickly outdistance the jaded mules of the whites and the Indians could lose themselves in the labyrinth of deep arroyos which flanked their camp.

Whipple's men undertook to cross the river at the ford which the warriors had pointed out to them. Their wagons were soon floundering in the quicksands; and while they worked desperately to save their train from destruction, the last of the Kiowas galloped away and disappeared in the canyons leading off to the north. They were not seen again.

A few miles up the valley, the trail blazers came upon a deserted encampment which only recently had been occupied by many warriors who had grazed an estimated thousand horses in the rich buffalo grass. Whether they left the spot before they learned of the white men crossing their domains to scout a route for the iron horse, or whether they had discreetly withdrawn from the death carried in the pale-face bullets, no white knew. The one thing which mattered was that they had gone away leaving the expedition to pass through in safety.

For more than 300 miles now, the unfriendly spies of the savage had seldom been out of sight and the threat of a painted war party hiding just behind the next hill was always hanging over them. But as they pushed the survey rapidly west toward the head waters of the Canadian, Whipple's party soon left the homelands of the Kiowa and Comanche. Tension lessened.

A few days later, they crossed a spur of the Staked Plains and entered New Mexico. Here they began meeting parties of traders from the Spanish settlements and from the Indian Pueblos, who were going west to meet the Comanches when they

returned from their buffalo hunt in the north. Mr. Whipple was amazed at the number of these bold traders. Occasionally, they said, one would be robbed of his goods or murdered for them, but such crimes were rare.

Traversing sandy wastes, and plains covered with the dry grass of autumn, the survey followed Tucumcari Creek to its head, crossed the low divide, and sixty-seven days after leaving Fort Smith descended to the Pecos River at Anton Chico, a Spanish village of 500 people, standing on a bench overlooking the crimson waters of the Pecos River. Here they encountered white civilization for the first time since leaving Fort Smith. But they did not tarry long. They scouted the steep canyon walls for a place to take their steel out to the broken plains beyond, and continued toward Albuquerque.

The expedition was divided after leaving Anton Chico. Campbell led one party through San Antonio Pass and down Tijeras Canyon into Albuquerque. He pronounced this route perfect for a railroad. Other engineers who surveyed it half a century later backed his judgment. The Santa Fe came within an ace of using it when they built their freight cutoff in 1908, and except for the squabble over right-of-way might have done so, thereby cutting out the extra terminal at Belen.

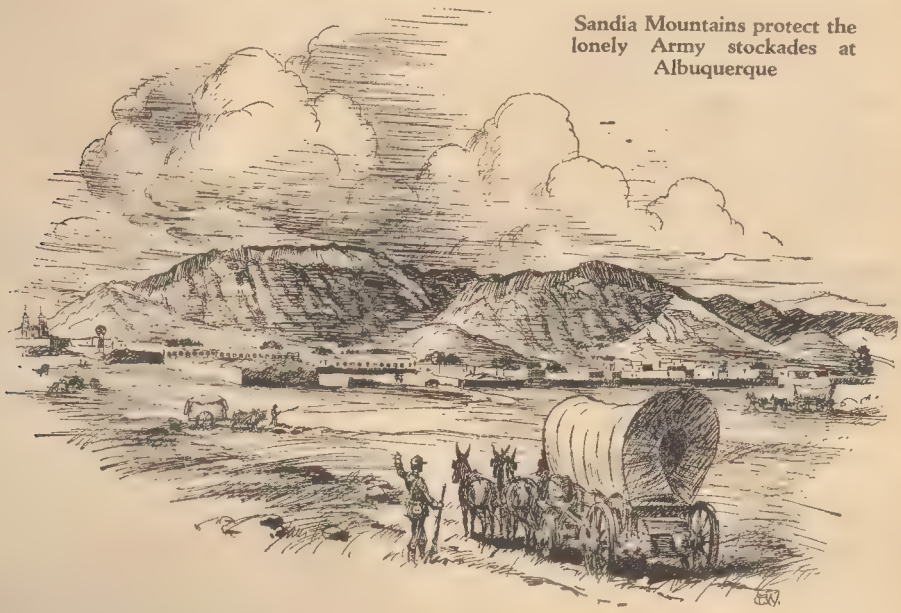
Lieutenant Whipple, leading the other group, angled north to seek a pass through which his route from Fort Smith could be built to a junction with a proposed railroad coming across the northern plains and through Raton Pass. Having found the pass he sought and assured himself that the line could be constructed down the Galisteo River to its junction with the Rio Grande, he hurried on to Albuquerque. He arrived there on October 5th, eighty-six days after leaving Fort Smith. When he received his assignment, he had hoped to reach Albuquerque early in September and to carry the survey to the Mojave Villages on the Colorado before winter set in.

Now, he intended to rest a few days in Albuquerque, check his supplies out of the commissary, and push right on. But the jinx of delay was still on his trail. Indians were on the warpath in the south end of the territory. Unforeseen troubles had arisen along the Mexican boundary. General Garland, commandant on the Rio Grande, had gone down to the site to take charge of the situation. His assistant at the commissary in Albuquerque refused to reduce his own dwindling stocks to supply the expedition. Since Lieutenant Whipple could not buy supplies elsewhere, he was forced to wait nearly a month until General Garland returned.

Some of his party visited Santa Fe to study the people and government of New Mexico, knowledge that would be vital to the railroad when it came. Others visited the placer mines in the cold mountains northeast of Albuquerque and the coal beds known to exist there, in order to estimate the probable amount of traffic these would supply. Together with Campbell, Whipple studied the lay of the land to the south and west, trying to figure the best way to get their railroad out of the Rio Grande valley and up to the Continental Divide through the Sierra Madre.

THEY definitely decided to bridge the stream near Isleta, not far from the point where today's streamliner crosses it. They concluded, too,

that the best way to leave the valley was to edge along the gravelly ridges to the southwest, cross the low divide to the Puerco and follow a tributary of that stream to the Continental Divide. At the same time, they busied themselves gathering information about the country between Albuquerque and the Rio Colorado. As far as Zuni, 151 miles away, it was well known, had been known for three centuries. And only two years before, Captain Sitgreaves had led a mule train west from Zuni. They studied his maps and talked with men who had been in his party. They also conferred with every white man who claimed to have traversed any part of the mountains near the 35th Parallel. All told stories of desolation, of hardship and of suffering. There was little probability, they all said, of finding a route over which a railroad might be built.



Sandia Mountains protect the lonely Army stockades at Albuquerque

But Mr. Whipple had orders to scout the territory.

He called in Antoine Leroux, a seasoned guide who had crossed the mountains with Sitgreaves, and Manuel Savedra, a New Mexican who claimed to have made the crossing twelve years before with a party of Moquis on a foraging expedition against the Mojaves in the rich valley of the Colorado. Each professed to know the country. Each doubted that he could take a wagon train through the mountains, but both were willing to attempt the crossing again. Whipple hired the two men as guides.

General Garland returned from his Indian campaign late in October, and immediately ordered his commissary to supply the expedition from stocks on hand. Mr. Whipple hired New Mexican herders for his livestock. Then, when November's frosts were yellowing the cottonwoods along the banks of the Rio Grande, the party divided in Albuquerque. Mr. Whipple took the wagons west across the ridges along a road worn deep by the wagon trains from Fort Defiance and by the feet of men and mules from Zuni and Laguna. En-

gineer Campbell carried the survey to Isleta, over the ridge to the valley of the Puerco, and traced the route on northwest along the San Jose toward Laguna.

Five days later, the two parties met near there. Campbell was elated with the results of his survey. He had brought his line up from the Rio Grande on a maximum grade of less than one percent, and had brought it down into the Puerco at thirty feet to the mile.

Laguna, then as now, was an Indian village whose people lived in houses of adobe standing on a hill overlooking the river. They irrigated their fields from the Rio San Jose whose clear waters came from springs up toward the Divide. They grew melons, squashes, corn, chili, and frijoles for their subsistence. A day's trek took the party to Covero, a frontier Spanish settlement not far up the valley, where they stayed overnight. The train was delayed next morning. Neither herders nor packers showed up for the departure. Instead, a deputation informed Whipple that most of the boys he had hired in Albuquerque lived here in Covero. Their women did not want them to go into the unknown land; they might never return. Whipple advanced the men a month's pay with orders to turn the money over to their wives. The psychology worked and the party was permitted to go on.

The train followed the worn trail while the surveyors sought easy grades for the path of steel. Whipple constantly questioned the guides. At night, around the crackling cedar fires which burned in front of their tents, they argued the problem of which was the better route toward the west.

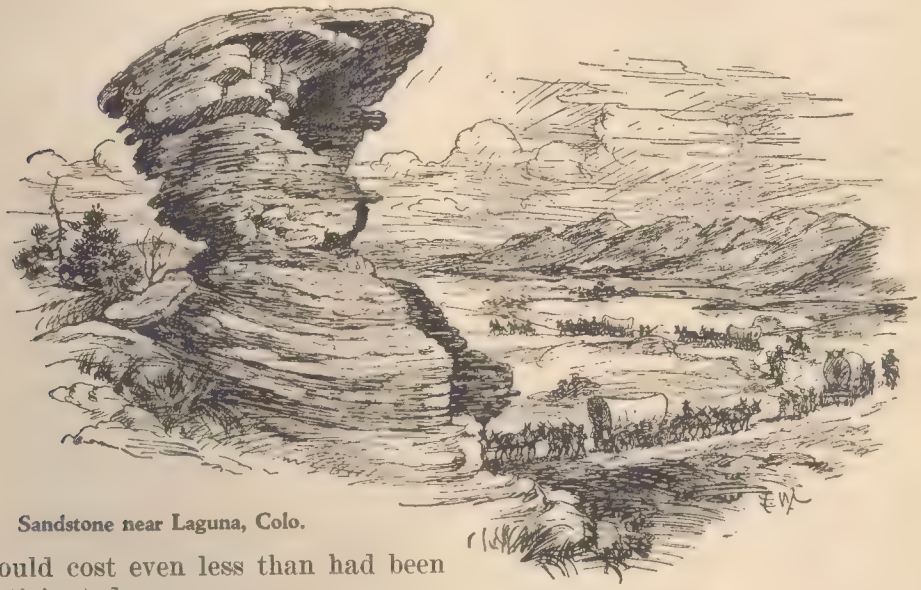
Savedra said by the Zuni way. This was the old, the known, route. It had been blazed by the Spanish Conquerors three hundred years before. It was the route suggested to Mr. Whipple in his orders. But—there was another way, one marked out by the moccasined feet of the Navajos travelling to and from their desert home. The army used this route in hauling supplies to Fort Defiance, and Leroux had travelled it through a low pass over the Divide and into the Navajo country.

"This," he urged, "is the route which you should take. Instead of crossing through the rugged mountains to Zuni, you would follow an easy grade to the head waters of the San Jose. There you would cross the Divide without knowing it, and go down the Rio Puerco of the West to the Little Colorado. If you go by the Zuni route, you will find heavy grades, difficult construction, and a long tunnel."

Whipple decided to survey both routes. Certain he could take his wagons by way of Zuni, uncertain whether he could find a way down from the other pass for them, he took the train and most of the instruments and followed Savedra west along El Camino Del Obispo, toward the dark ridges of the Zuni Mountains. Campbell, with a soldier escort and with Leroux as guide, turned right along the east side of the ridge, and followed the Fort Defiance road into the northwest.

The way through the Zuni Mountains was not easy for the wagon train. They ascended the eastern slope over dark lava rocks and along stony ridges, wound through dark forests of spruce and fir alive with antelope and deer and turkeys. Sometimes snow flurries swept over them

and the temperature fell to zero. But the country was pleasing. A railroad could be built through it to approach the summit on grades of more than a hundred feet to the mile. It would require a tunnel nearly a mile long under the crest; but its construction was not impossible. It would cost even less than had been anticipated.



Sandstone near Laguna, Colo.

Following a mountain stream to its junction with the Zuni River, Whipple went into camp a few miles above the Zuni Pueblo. There, he awaited the coming of the scouting party which had followed the northern route.

Again Mr. Campbell was jubilant. The route he had traversed was the answer to a railroad builder's prayer. He had surveyed to the top of a low dividing ridge which separated the waters flowing to the Atlantic from those to the Pacific and the grade was so slight it could not even be detected without the use of instruments. The crest of the ridge was a trifle over seven thousand feet, and the descent to the west was easy.

So Lieutenant Whipple named the gap Campbell's Pass and described it in his final report to Congress as "a wide gap, separating the ridge known as the Zuni from the Sierra de San Juan . . . The great advantages of this pass consist in its single summit; in the easy grades by which it may be approached from east and west; in the convenient position of streams and springs, and timber."

These facts were verified fourteen years later, when other engineers surveyed the route with chain and level and definitely chose it for the Atlantic & Pacific Railway which had then been chartered. Mr. Campbell estimated that the grade need not exceed thirty-two feet to the mile. According to Employes' Timetable Number 85 of the Santa Fe Coast Lines, the ruling grade ascending from the Puerco of the East to the crest is 31.7 feet per mile, nor does the grade exceed that in its descent down the Puerco of the West from Thoreau to its junction with the Little Colorado above Winslow.

(To be concluded)

"Down Under" Railroads

By NORMAN C. HARRIS

Chairman of Commissioners, Victoria Government Railways

as told to

ALICE LUIGGI

VICTORIA, sixth in area of Australia's eight states, holds several claims to distinction. Roughly the size of Illinois, Victoria has within its 87,884 square miles nearly one-third of the nation's 7,306,000 people, and about one-sixth of its total rail mileage. Competing for an international record, Victoria has its innings against our own biggest commuter road, the Long Island Rail Road. For the Flinders Street station in Melbourne—Victoria's capital city—boasts of being the busiest suburban terminal in the world.

Except for sections of uninhabited mountain country, seventy-five percent of Victoria is within eight miles of rail service. And this in spite of the fact that more than half the population has crowded itself into Melbourne, on the coast. From this hub two types of lines fan out. Suburban electrics comprise 173 miles of trackage, the longest run being to Frankston, twenty-six miles way. All electrified lines gain entrance to Melbourne at the Flinders Street station.

Steam railways radiate mainly from Spencer Street station at all angles and to all regions of the state—4,575 miles of double iron. Three extend on the

Variety of Gages Creates a Real Problem in Unification

border line of New South Wales, the third section crossing into the territory for a 38-mile stretch. But while connections with the New South Wales network are made, there is no through traffic: for track gages differ. This difference in width between the rails is one of Australia's current vital problems. Afoot is a seven-year plan for standardization.

Over 4,600 miles of Victoria's railways are five feet, three inches. The remaining 144 miles, mostly in hill country, are two and one-half feet wide. For one hundred years ago, when the surveying was done, the Irish gage was agreed upon by all states. Victoria ordered its motive power and rolling stock and made all plans for the construction job, and then New South Wales got a new chief engineer.

The South Wales official persuaded the state parliament to switch to the English gage, four feet and eight and one-half inches. Victoria and South Australia held to their original decision: Victoria had a roster of high-cost equipment at stake. But the mistake was realized during the early Eighties, when Victoria's most important main line met the line from Sidney at Albury. Things have been rather tough ever since.

Queensland, Western Australia and Tasmania—all have a narrow gage, three feet, six inches. There are several reasons for this. The area is vast and sparsely populated, and the difficult engineering problems posed by the region would have made a wider gage too expensive to build and too costly for maintenance.

Long before World War I, the argument for unifying Australian gages had already begun. Should a plan now before the state parliaments be ratified, Victoria will have to undertake the job of converting 4600 miles of railway to standard width. As proposed, the scheme will give four years to preparation of the right-of-

Steel viaduct on the Albion-Broadmeadows line, a Melbourne suburban route located northwest of the city. It joins the Craigieburn and Seymour trackage at Broadmeadows. The viaduct shows the trend away from British-type construction

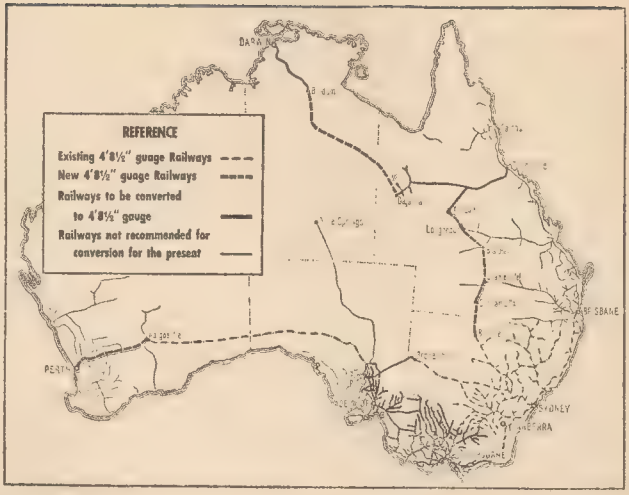
way, three to the actual changeover. No line will be closed for longer than a week. One rail will be shifted six and one-half inches toward the center, thus displacing the center line of the tracks three and one-quarter inches. At stations, both rails will be moved inward three and one-quarter inches to preserve clearance from our high station platforms, which are everywhere about level with car floors.

The Transcontinental from Port Pirie in South Australia to Kalgoorlie in Western Australia is standard gage. A standard extension from Kalgoorlie to Perth on the West Coast is now being surveyed. Thus a uniform linkup clear across the continent can be effected by building a 400-mile standard-gage section from Broken Hill in New South Wales to Port Pirie, where the Transcontinental begins. At present a narrow-gage line carries the heavy traffic from the rich Broken Hill lead and silver mines to Port Pirie smelters.

THAT Flinders Street station is the busiest suburban station in the world may surprise American readers. It surprises no Victorian train dispatcher. The latest count in 1941 (and traffic is heavier now) gave an average of 310,761 passengers passing through its barriers daily. During the morning and evening rush hours, 110 seven-car trains are in continuous operation. These seat 628 passengers but often carry one thousand. Sixty-one trains, principally of four cars, are sufficient to meet the demands of non-rush traffic.

One record-breaking day, 1,092,000 suburban riders passed through the station on 2,562 trains in and out of Flinders Street and the adjoining Prince's Bridge terminal station. For two hours, trains were signalled at 102 an hour—or one every thirty-six seconds. Compare these figures with America's busiest commuting line, the Long Island Rail Road into Pennsylvania station: concentration there

Left: **Flinders St. Station, Melbourne, is VGR's busiest. 1941 ta'ly showed average daily number of passengers using the station was 310,761. Princes Bridge Sta ion is connected but is not visible in picture**

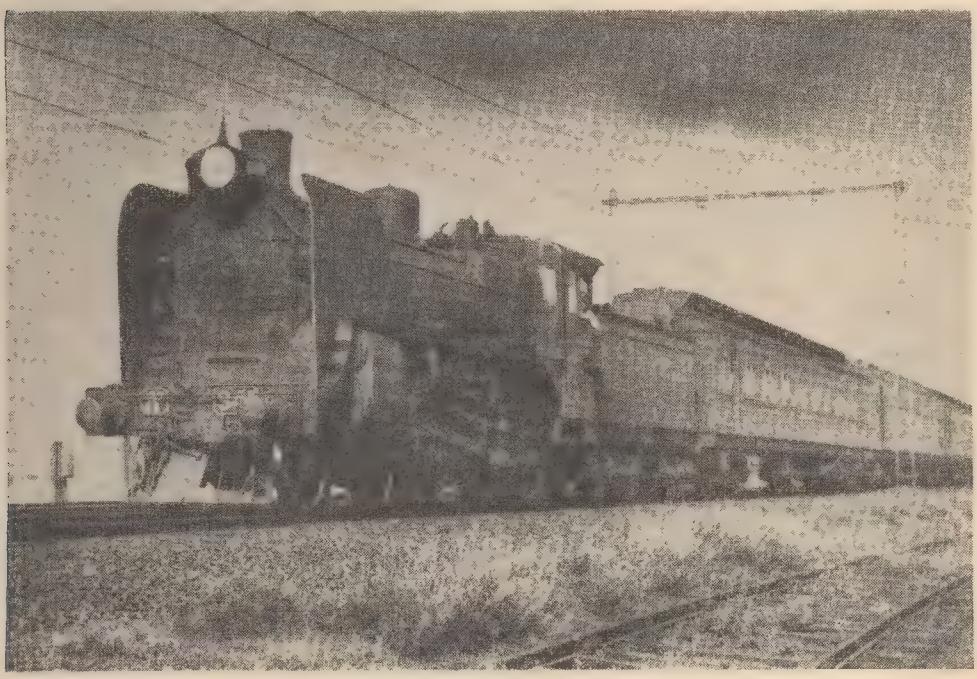


Below: **Nearing W. Kensington in Melbourne suburban area is 6:30 a.m. down train with Number 941 on the headend. This A2 class 4-6-0 wears a Wagner type front and smoke deflector plates**

is one train every fifty-six seconds; the daily average, 300,000 passengers on 850 trains a day, in and out of the Gotham terminal.

On Victoria's suburban trains, quick loading and unloading of passengers is effected by eight sliding doors on each side of the cars. Winter or summer, these doors are often open, much to the discomfort of American visitors. That exit from them is quick will long be remembered by those who read a news item about a Victorian mother who pushed her baby's carriage from the platform into a compartment. The young woman relaxed her hold for a moment and the carriage shot across the coach and out the opposite door. It came to rest in the pit between the double tracks, safe from oncoming trains.

To speed up passenger trains by relieving them of carrying parcels, five ex-



press cars run on fast schedules throughout the suburban area. Twelve electric locomotives haul suburban goods—freight to you—and double as switchers. This system seems to satisfy both shipper and commuter.

Outside and above the main doorway of Flinders Street station, a dozen clocks indicate the leaving time and platform number of the next train on principal suburban lines. Breathless passengers can decide at a glance whether to rush right ahead or stop off for a quick one in Young & Jackson's famous pub, for a few moments' meditation in St. Paul's cathedral, or a last-minute purchase at a leading department store—all across the street.

It was to a station near the present one at Flinders Street that the first railroad in Australia, constructed in 1854, ran from Port Melbourne two and one-quarter miles away. Prospectors bound for the newly-discovered goldfields northwest of Melbourne were arriving by ship at the rate of fifteen hundred a week. From Port Melbourne they trekked a hundred miles northward to the diggings. Several poorly financed lines were started which the state government rescued and continued.

By 1862 railways were completed to the Bendigo and Ballarat goldfields and by 1879 all privately-owned lines had been taken over by the state. Whether this was due to the vision of settlers of the advantages of state ownership, or to a skillful means stockholders took of shedding shaky investments, is still debated. But there is no doubt at all that the government had the greatest hand in developing Victoria's railway system.

Seven blocks west of Flinders Street station but linked to it by steel is the Spencer Street station where most steam trains to the country now originate. From there run the lines to the sections more famous now for their apples and wool than for their gold. The Bendigo line was built in the characteristic British style with heavy stone bridges, stone stations, high embankments, double-tracking and tunnels to preserve as even a grade as possible throughout the line. An Australian type of construction has since developed to save costs where traffic is

Original engine of this 2-6-2 tank design was built by Baldwin. Remainder was constructed at VGR Workshops, Newport, in 1908 for a two foot-six inch gage

Showing network of VGR's mixed gage. Dots indicate narrow gage

light. Pioneer lines are single-tracked, cross heights through shallow cuttings and sag in the intervening valleys; and they are located so as to minimize earthworks and the construction of bridges.

The Ballarat goldfield route later connected with the line to Adelaide in South Australia. Since the gage in that state is also five feet three, trains pass straight through. Adelaide's *Overland Express* carries sleeping cars, one of our two trains that do. Since the temperature seldom falls below the upper 20s during the winter months, we do not heat our cars. Consequently, the American traveler is surprised on boarding the sleeping car to be handed a hot-water bottle.

During the night, though, he undoubtedly appreciates its advantages, as he most certainly does the footwarmer he encounters on our country day trains. This is a metal can three feet long, containing a strong solution of sodium acetate. Warmth is restored by shaking. Americans, puzzled to see their fellow travelers shaking their footwarmers, may wonder whether they are kept warm from the chemical inside or from the constant, vigorous exercise in stirring it up. Americans also learn to carry motor rugs to wrap in, as European train riders do. But the Aussie in the States, alas, has never devised any means of keeping comfortable in the asphyxiating heat of your trains in winter.

SEVERAL of our trains, however, boast air conditioning both in winter and summer. The *Spirit of Progress* on the main line connecting with trains to Sydney

Horseshoe curve looks sharper on the narrow gage. Fern Tree Lulley train bound for Lembrook is headed by Number 9A, a 2-6-2 tank

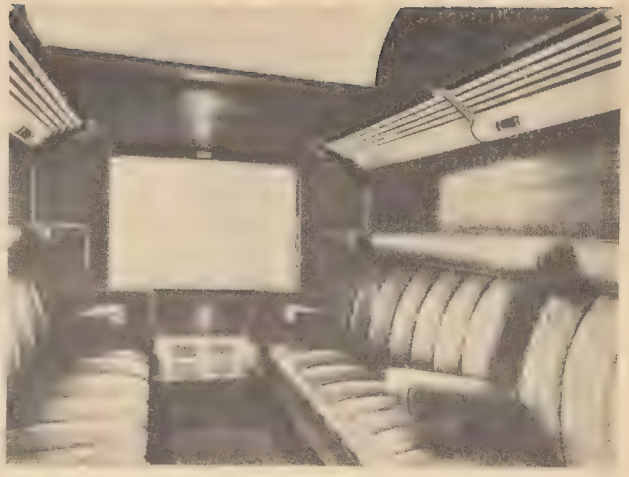
at Albury on the Victoria-New South Wales border is the pride of the Victorian Railways. This train leaves Melbourne at 6:30 p. m. and reaches Albury at 10:20, doing the 190 miles non-stop. The following morning it leaves Albury at 7:50 and arrives in its Melbourne terminal at 11:30.

The consist on the *Spirit of Progress* includes a combination baggage and mail car, a dining car, seven or eight coaches and a club car. All coaches are built with a corridor along one side and compartments on the other. First-class compartments seat six passengers, second-class seat eight. High-tensile corten steel is used for the main structure and the outside skin of the cars. Wall panels are of choice Australian woods, with a small medallion indicating the name of each wood. Cars boast of indirect lighting, and there is a reading lamp for each passenger.

"S" class Pacific locomotives, introduced between 1928 and '30, haul this train. In 1937 four of these veterans, named after Victoria pioneers, were streamlined and painted royal blue and gold to harmonize with the new train. Like it, they had been designed and built by the staff in the railway shops at Newport. In the eighteen years since Number S-300, the *Matthew Flinders,* began running, it has broken the million-mile mark and is still going strong. The average yearly mileage of this train and its three running mates is more than 67,000 miles.

Another locomotive built in the Newport shops is the Class H 4-8-4 now hauling fast freight, but intended for express-service operation to Adelaide when the track has been strengthened. At present, a heavy gradient makes doubleheading with lighter locomotives necessary. Still in active service are narrow-gage engines, switchers and freight locomotives built in these shops fifty years ago. Since 1888 Newport has furnished almost all equipment used by the Victorian Railways, from hammer handles to luxurious passenger cars, from bolts and nuts to locomotives. In the busiest year, over a thousand freight and passenger cars were turned out, plus seventy-four locomotive boilers and one complete locomotive each week.

A comparison between such early loco-



Solid masculine-looking comfort distinguishes this first-class compartment. Leather upholstering in dark blue compliments the walnut paneling and dark brown carpet, a Saxony Wilton

No look of the Victorian period's decorative scheme disturbs the modern lines of this dining car on the *Spirit of Progress*; but furnishings—Axminster carpet, panels of Queensland brown beech, pastel green chrome leather—have luxurious ring

Modernly equipped kitchen serves this air-conditioned buffet car. Leather-backed chairs seat eighteen, while corridor space prevents standees

motives as the six-wheel Y class switcher built in 1889 and the latest type H class locomotives will readily show that the early engine followed in every detail English construction of that epoch. Characteristics were the plate frames, inside cylinders with Stevenson gear and the safety valve which consisted of two valves with one central spring. But the latest H class locomotives built in 1941 follow American practice closely, even to such details as their headlights and automatic couplers. A slight English touch remains in the retention of the three-cylinder arrangement and the chrome-plated bands around the front and rear of the external cylinders and steam chests.

And even though old-timers followed English patterns closely, the jack so characteristic of American engines of an early epoch can be seen. This was the first infiltration of American practice.

Since hauls are short, most freight cars follow the

They aim to be conspicuous for safety at crossings. Stripes of yellow chrome and black give these rail limousines their familiar name of "tigers"

European two-axle design. Modern cars are all steel, entirely welded, with loading capacity up to thirty tons. Our principal items of freight are wheat and other cereals, fuel, fertilizers, timber, fruit and wool. In the absence of extreme weather conditions, we do not heat freight cars, nor is there any heavy demand for refrigerator cars. Most freight cars are open, although when necessary, loading is protected by tarpaulin covers. Large numbers of sheep are carried in double-deck stock cars.

Always of interest to American visitors are rail limousines on branch lines where traffic does not justify steam trains. They are popularly called tigers from the yellow and black striping that makes them conspicuous at grade crossings. The tigers run on rails by means of flanged steel tires. A self-contained turntable mechanism enables them to reverse their direction with the greatest of ease.

DURING war-caused coal shortages, wood was reluctantly resorted to as fuel on freight and switching engines, and an estimated 90,000 tons of coal was saved. Refueling stops had to be made three times as often as for coal. The use of wood was discontinued during the dry summer months to avoid fires started from sparks along the right-of-way. Most of our older engines have the English narrow firebox with grate areas not more than twenty to twenty-five square feet. Anyone who has fired an American wide firebox with low quality coal will appreciate the achievement of our firemen in keeping up steam when burning wood in a narrow firebox.

Trains out of Melbourne have to climb the long grade up the Great Dividing Range which runs midway across Victoria from east to west. Victoria's rail crossing at 1,900 feet above sea level has an important bearing on the operation of trains. On arterial lines radiating from Melbourne, the ruling grade is two percent. A double-track tunnel 1264 feet long at

Largest and most powerful locomotive in 1918 was VGR's C Class Consolidation. Tractive effort, 37,000 pounds; weight, 127 tons

One of four royal blues bearing the name of a notable figure in early history of Victoria, this S Class Pacific handles express trains between Melbourne and Albury

Below: VGR's Newport Workshop, showing interior of new boiler shop. Boilers are tested inside the building from which a suction fan withdraws the smoke

Elphinstone and one at Ravenswood of 1276 feet pierce the Range on the main Bendigo line. These are two of the three longest tunnels on the entire system.

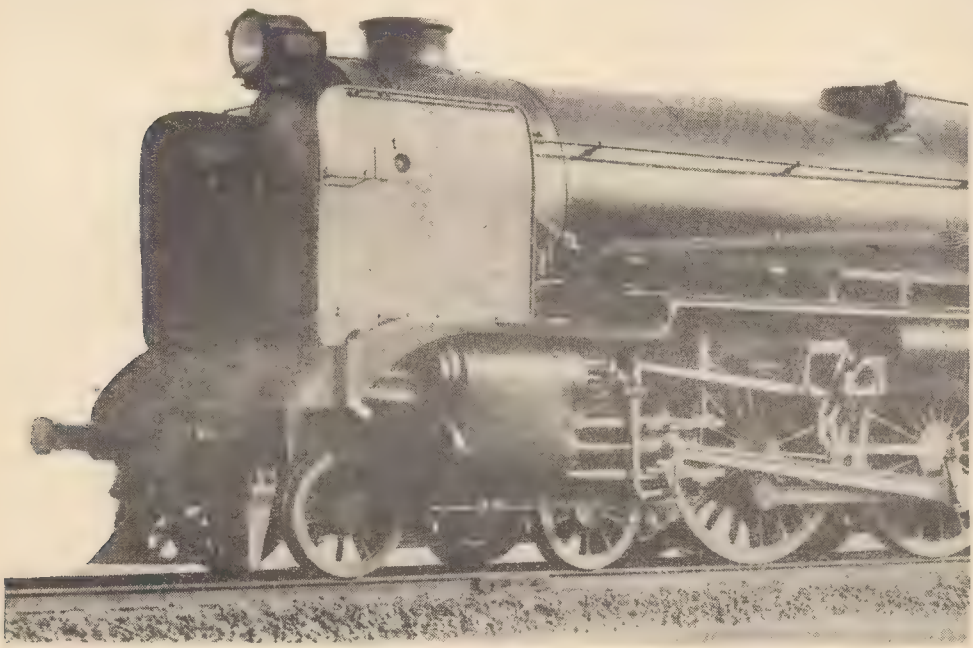
On mainline roadbeds, the minimum depth of broken stone or gravel ballast is

Y Class Switcher is also used for local goods train work. The 0-6-0 above was built in 1889

ten inches; width of formation is eighteen feet. On lines where highspeed trains are run, requirements are increased. Owing to our relatively dry climate, with no long-continued rains and no snow except in mountainous areas not reached by rail, proper drainage of roadbeds is not so difficult as in the States.

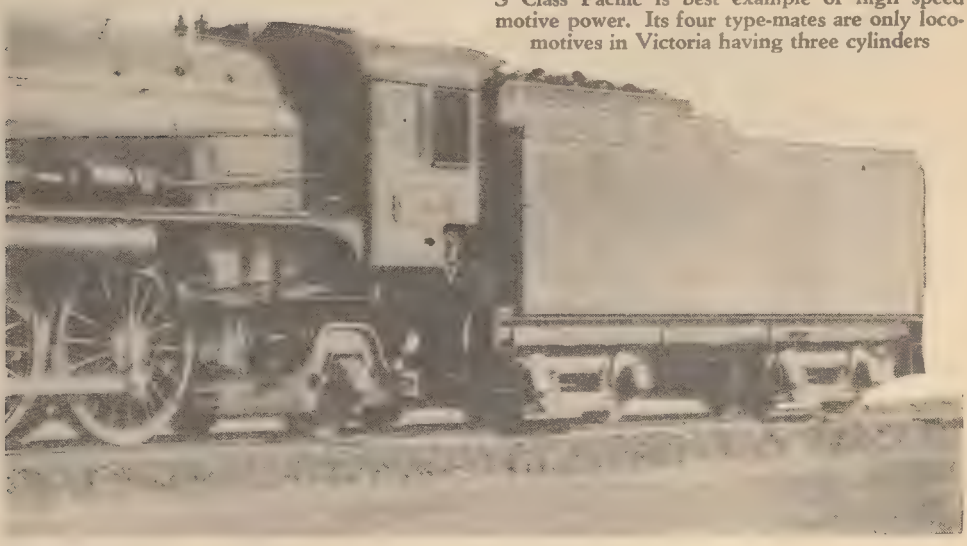
While there is little need to retain snow fences as on many U. S. railroads, Victoria terrain demands sand fences. Up in the Malee, Victoria's dust bowl, sand drifting across the tracks has delayed many trains and caused considerable expense for removal. To combat the sand, wind-chute fences have been built from old ties and corrugated iron or timber. The fance stands eight feet from the track center and slants away from the line on the windward side. Slopes of cuttings to leeward have been flattened to let sand blow clear. At the bottom of the fence is a space about three feet high. Air currents strike the top and are deflected downward, collecting the blowing sand and carrying it across the rails, clear of the track.

On main lines, two hundred miles are laid with 100- to 110-pound irons. About two thousand miles are laid with 80- to



VGR passenger trains no longer double as mail carriers. Suburban area of Melbourne is now served by express cars hauled by engines like the H Class above. *Below*, heavy Decapod built in 1931

S Class Pacific is best example of high speed motive power. Its four type-mates are only locomotives in Victoria having three cylinders



94-pound rails, and the remainder chiefly with 60-pound. Welding of rails into longer lengths has become an established policy. So far, some seven hundred miles have been welded into 100- to 170-foot lengths at the Spotswood flash-butt welding shop. Two continuous sections are 4748 feet in length. In the Elphinstone tunnel, the rails are 1710 and 1530 feet long.

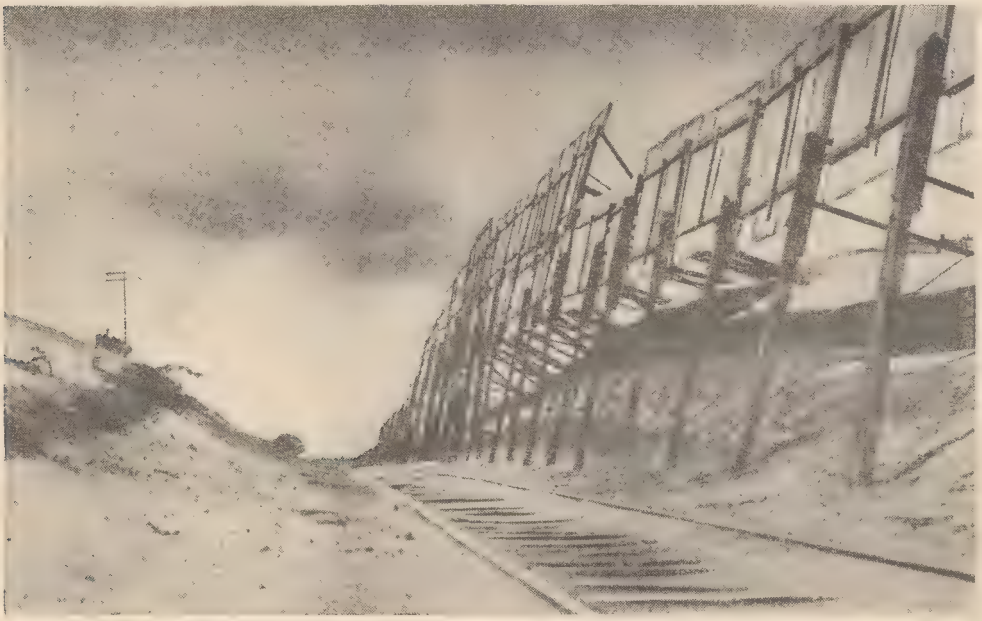
To indicate imperfections in tracks which may cause passenger cars to oscillate or lurch, the Hallade track recorder makes periodic trips over the line. This machine occupying only a small space in a passenger compartment, contains a band of paper which records the location and nature of track defects. It has reduced breakdowns to a negligible number.

Among the interesting structures of Victoria's railways is a wooden trestle at Noojee on a branch running into the timber district. Rail level is ninety feet above the stream bed. The trestle carries a single track up approximately a two-percent grade on an eleven-degree curve. Local eucalyptus timber was used. The trestle consists of four spans of fifteen feet each; nineteen spans of twenty feet; and four of forty-one feet. Piles are driven to the rockbed of the stream.

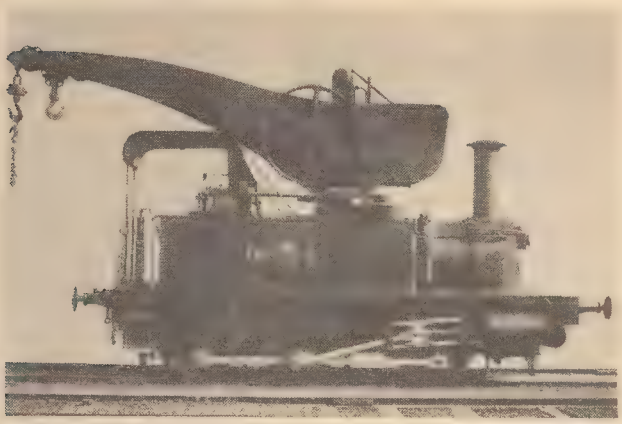
Another noteworthy bridge was that built in 1929 near Melbourne. It has double tracks with a plate girder superstructure on concrete foundations and steel piers. At its highest point, the bridge is 179 feet from rail level to river bed. It has twelve spans of thirty-nine feet and thirteen of sixty-one feet.

Signaling is done generally by means of semaphores, following closely the British design. That influence is still apparent, too, in rod and manual operation of signals and switches. But on electric lines carrying heavy traffic into Flinders Street station, interlocking and electrically operated switches are used.

A very complete development of telephonic communications between the Melbourne headquarters and all stations and signaling towers permits rapid control of all trains from one central dispatcher's office in each district. Notwithstanding this precaution, a colony of sugar ants was once able to hold up two special race trains carrying 1,200 passengers. A sig-



Combating sand drifts with wind-chute fences on Australian terrain



Locomotive steam crane balances a five to seven ton weight atop an 0-6-0 tank

nal went to danger and all attempts by signalmen to move it failed. Then repairmen found that ants had entered through two 1/16-inch holes in the steel casing surrounding the sensitive track relay mechanism and were swarming between relay contacts.

FOR a road that operates only one dining car—that running on the *Spirit of Progress*—it might seem a bit ambitious to maintain a dining-car depot with its own poultry farm producing 30,000 dozen eggs yearly, a slaughterhouse and a bakery. In addition to supplying meals to the dining car and light refreshments on four buffet cars on country trains, this depot also distributes excellent hot meals to thirty-five station restaurants throughout the state. There are no concessionaires. The depot runs even the many fruit juice and milk stands that dot the lines.

The refreshment-services branch maintains two large hotels in the highly scenic Australian Alps at Mount Buffalo and Mount Hotham. These might be termed equivalent to the State's famous Sun Valley hotels. They are open all year round and are as packed to the eaves in summer as in the skiing season.

Among public services normally conducted by the Victorian Railways is an "agricultural college on wheels" which carries exhibits of better production methods to farmers, graziers and fruit growers. As many as 5,000 persons from remote parts of the state have visited it in one day.

And a boon to young children and their mothers coming to Melbourne by train has been the crêche in Flinders Street station. In six years, 160,000 children were cared for by trained nurses under highest standards of hygiene.

Up to 1946, exceptionally good relations existed between the railways and their 27,383 employes, whose annual wages last year were $27,738,385. Eighteen centers were maintained throughout the state to cater to educational, social and sports activities of employes and their families. All new workers are given training courses, and in addition, an excellent apprentice-training system is maintained. Chosen junior employes are given parttime instruction at the department's own technical college. Outstanding apprentices may qualify for scholarships at Melbourne University or senior technical schools and are paid wages during the five-year course. After graduation, they return to Victoria's engineering staff.

In this country of queer fauna, maintenance men have troubles all their own. Every spring they watch overhead equipment warily for nests of our huge magpies.

A favorite nest-building material is short lengths of rabbit fence wire. One early bird held up the morning rush traffic for two hours by dropping a nesting length on a live overhead wire near Melbourne. Portions of the 1500-volt equipment were burned out and a train pantograph was damaged.

Just as the crew had finished mopping up the trouble, the bird landed on a 20,000-volt section with a long wire in its beak. While the perspiring repair gang watched, the magpie teetered for ten long minutes in a high wind. Finally it took off safely with its burden.

Light of the Lantern

Five Freight Cars for Four

Aluminum construction may lighten trainweight by as much as 11,400 pounds per car if experimental models built by the Illinois Central and the Chesapeake & Ohio prove successful

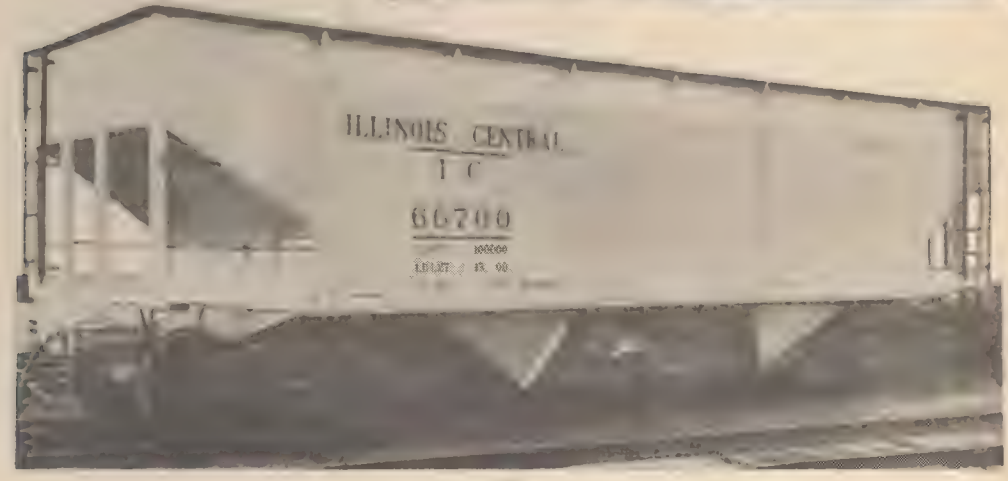
Above: One hundred aluminum hopper cars of the type pictured at Illinois Central's McComb, Miss., shops, would represent a saving of approximately a million pounds, or the equivalent of the entire loaded weight of six all-steel hoppers

At Left: Shimmering in bright glow of overhead lamps, these ten aluminum boxcars of fifty-ton capacity are about ready to leave the C&O's Russell, Ky., shops, where they were fabricated. Each is forty feet six inches long, and weighs about 8200 pounds less than a comparable steel unit

At Right: IC's aluminum hoppers are numbered 66700 through 66704. Bodies are fashioned from quarter-inch sheets, approximately seven by eight feet in size. Rivets are aluminum except on steel underframe

Above: One of five experimental C&O hoppers show greatest saving in car weight yet achieved—11,400 pounds per unit as against 9,900 pounds for the Illinois Central model. Like Chessie's aluminum boxcars, they are a product of the Russell shops

At Right: Aluminum rivets used to assemble plate of 2900 series cars, along with others on these pages required special heat control, supplied in electric furnaces



Veteran of a 43-year receivership, the Pittsburgh, Shawmut & Northern made another new record in 1947, when it became the largest abandonment of the year. PS&N Number 12 *left*, a 4-4-0 at Lewiston, Pa.

INFORMATION BOOTH

Each month the Lantern Department prints answers to rail questions of general interest, submitted by our readers. We do not send replies by mail.

1

LIST *major 1947 railroad abandonments.*

United States railways abandoned 670 miles of line last year, more than in any twelve-month period since 1943, and 243 miles above the 1946 period. Despite considerable new construction, the total of 154 miles of first, second, and third tracks built lagged far behind abandoned trackage.

Biggest abandonment was the 172.56 miles of track of the hapless Pittsburgh, Shawmut & Northern, including all branches and its wholly-owned subsidiary, the Kersey. This terminated the oldest railroad receivership, begun in 1905, and ended the former Class I carrier's gallant fight against declining coal and traffic and against rising expenses. In second place was Florida East Coast's 136.58-mile Maytown to Mantola stretch of its Okeechobee branch. Originating little traffic in recent years, this segment was eliminated by building a cut-off, slightly over twenty-nine miles long, linking the Lake Okeechobee area with the main line. Third largest abandonment was that of the narrow-gage branch of the Sumpter Valley, extending fifty-seven miles from South Baker to Bates, Oregon. Motor-carrier service is being operated over routes formerly served by the rail line.

Fourth in mileage was the branch of the Southern Pacific and its lessor, the El Paso & Southwestern, running 31.56 miles between Alamogordo Junction and Russia, New Mexico. Only other entire railroad abandoned, beside the PS&N, was the Wood River branch, 5.70-miles long, extending from Hope Valley to Wood River Junction, Rhode Island. Passenger service had been discontinued in 1937, and it is said that only two carloads of freight moved over the line in April, 1947. The East Broad Top abandoned and took up the 4.60 miles of track on its Shade Gap branch, between Blacklog and Shade Gap, Pennsylvania, which, added to the fifty-seven miles of Sumpter Valley iron over which operations ceased, further shrunk the dwindling narrow-gage trackage.

Florida led in rail mileage abandoned last year, the FEC branch mentioned above accounting for its 136.58 total. Pennsylvania, with 120.99 miles was second, 94.21 of this being PS&N trackage; New York third, with its 78.35 miles of line belonging to the same road; and Oregon fourth, by virtue of the Sumpter Valley narrow-gage line.

2

EXPLAIN *why 2.2 percent is the common maximum grade on the main transcontinental lines through the Rockies and other Western mountain ranges.*

Courtesy American Locomotive Company

Ninety-two out of a hundred—that's Alco's 1948 production schedule for Diesels. ***Above,*** an overhead crane lowers a 1500 hp. turbo-supercharged Diesel engine into its chassis at Schenectady, as this road freight nears completion

No peeping! Working an automatic window wiper from below, a skilled operator can polish the side glass of a 12-car train in eight minutes flat. Machine was designed by UP Car Superintendent W. H. Gould of Pocatello, Idaho

Due to the historical accident that this was the top grade of the Baltimore & Ohio, this figure was specified in the various Pacific railways acts of Congress as the maximum grade to be allowed on the new lines. Steepest grade on a through line in the United States is one short 4.7 percent ascent at Saluda Hill, North Carolina, on the Southern Railway's Spartanburg-Asheville line.

3

WHEN *did the per diem of car service payment originate?*

This method of compensation, consisting of a railroad's payment of a definite price per day for the use of all foreign cars, as well as a fixed sum per mile run, was first suggested by a convention of car accountants, and was brought up and advocated by Mr. Fink, chairman of the Trunk Line Commission, in New York, in the fall of 1887. At his suggestion, and largely through his influence, it was tried by a few of the railroads during the early months of the following year. The amounts as then fixed were one-half cent per mile run, and fifteen cents per day. For various reasons, chiefly local to the roads which initiated the experiment, the plan was discontinued after a few months' trial. However, the statistics and other data collected led many to believe such an agreement the proper solution, in that it provided a strong inducement to all roads to promptly handle foreign cars, proving a great advance over existing methods of car service in that particular. Finally, after coming into general use during the 1890's, a code of per diem rules was formally adopted on April 24, 1902, with amendments being added on February 21, 1917.

4

FURNISH *data on Great Northern's use of Diesel locomotives in passenger train operations.*

With delivery of nine 4500-horsepower, three-unit locomotives, Dieselization of the *Oriental Limited* and the *Fast Mail* in both directions over the 1628 miles between St. Paul and Wenatchee, Washington, was inaugurated last December 13th. On the remaining 156 miles between Wenatchee and Seattle these trains will continue to use electric locomotives for seventy-five miles through the Cascade mountains and steam power the balance of the way. The streamlined *Empire Builder* has had Diesel power throughout its transcontinental run since the train's inaugural in February, 1947, except for the electrified territory. Addition of the nine locomotives to power the *Fast Mail* and the *Oriental* raised to twenty-nine the number of new Diesels delivered to the Big G during 1947, for passenger, freight

World's largest fork-and-ram truck rang the bell on recent try-outs with the 5-foot lift it gave an Erie 45,000-pounder. Constructed for heavy industry, the Skylift Giant is rated at 15-ton capacity

Track machines find both champions and opponents, so you can't blame an inventor for trying. Pictured *below* is a Swiss-built Matisa, being tested on the Harwich branch of England's LNER. It forces ballast under ties to level up track, handling 16 ties per minute

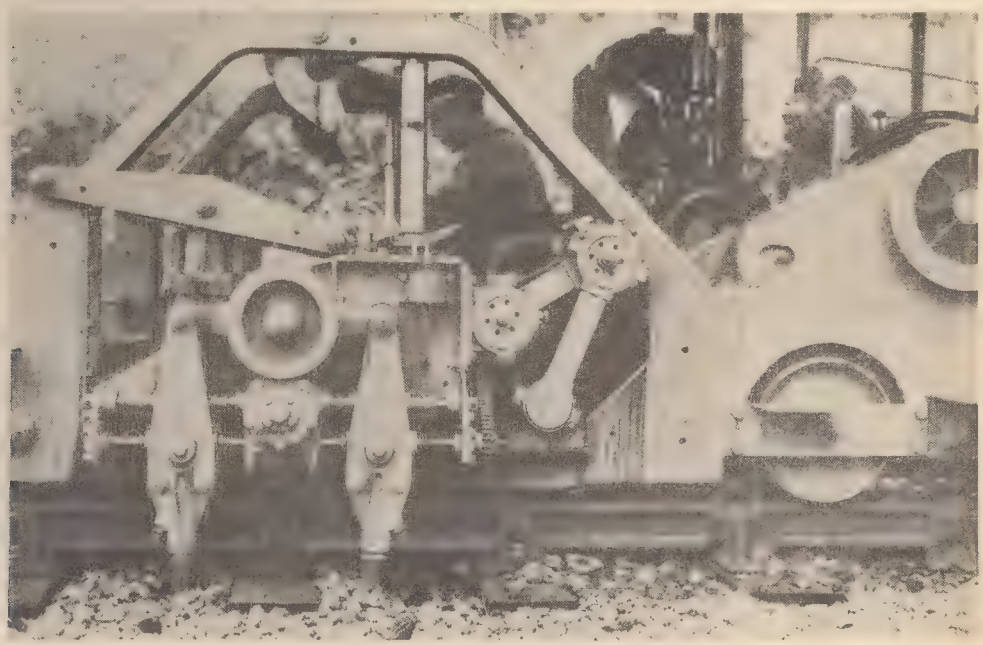
and switching service. The road now has a fleet of 145 Diesel locomotives.

5

KINDLY *supply further data on the Canadian National's Quebec Bridge, briefly mentioned in the article on bridges in the January issue.*

In 1853, Engineer Serrell first drew plans to bridge the St. Lawrence at about the same pont as the present structure between Cap Rouge and Charny. The estimated cost was three million dollars, but the span that was finally constructed cost five times that amount. Nothing was done at that time and the first bridge over the St. Lawrence was erected at Montreal. This was the Victoria Tubular Bridge (since replaced with a steel truss structure), nearly a mile-and-a-half in length, built by Robert Stephenson on the model of one he had constructed across the Menai Straits, on the line to Holyhead, Wales.

In 1882 the plan to span the St. Law-

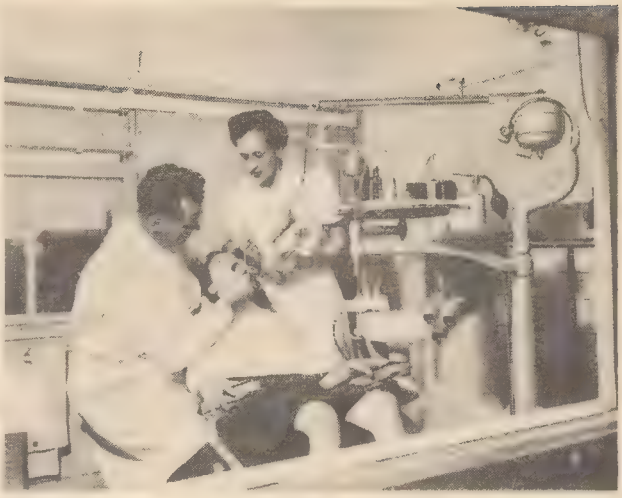


rence near Quebec was revived and a charter obtained to carry out the work. Engineers of the newly-completed Forth Bridge became interested. A design for a bridge of the cantilever type with a main span 1442 feet was submitted, but once more the proposal reached only the project stage. In 1887 the Quebec Bridge and Railway Company, was incorporated with a capital of one million dollars.

In 1900 work was begun on the substructure. This was completed in 1902, and the steel work went ahead until, in August, 1907, the south cantilever collapsed. The Dominion Government appointed a commission of engineers to investigate the disaster and then undertook to complete the bridge as Dominion Government work, appointing three engineers to prepare new plans and carry out the work. Tenders were called on cantilever designs. English, American and German firms entered the bidding, and the St. Lawrence Bridge Company, composed of the Dominion Bridge Company and the Canadian Bridge Company, joint owners of the capital stock, won the contract on their own alternative K-truss designs.

During the difficult war days the work progressed until, earlier than estimated, September 11, 1916 was set as the date for floating out the suspended member of the central span. Six hundred and forty feet long, weighing five thousand tons, with a depth at the center of 110 feet, this bridge section was stretched across scows, after it was erected at Sillery, and towed three miles upstream by tugs. It was to be lifted bodily 150 feet to its final resting place between the ends of the two cantilever arms. Never before had such a huge mass of steel been lifted to such a height by hydraulic hoists.

All went well until the unwieldy shape hung suspended some feet above the river. Suddenly it slipped, crumpled and disappeared beneath the surface of the water. A portion of one of the castings in the hoisting apparatus had failed at that crucial test. The plan and the span were found to be faultless and the other sections of the bridge were undamaged. With the September high tides in 1917 a new center span was moved into position. Extra precautions were taken with the hoisting gear. The span had to be raised to clear



Boxcar dentist. The J. A. Kilbys of Australia have their own version of a husband-wife career: a dental clinic quartered in two railroad cars. Based in Brisbane, the couple operate one of Queensland's three rail units. *Right*, Dr. Kilby and 12-year-old patient, with his wife-assistant

New use for highway coaches has been developed by the Missouri Pacific. Equipped with flanged wheels, an MoP bus *left* has replaced trolleys on the electrified run between Goose Creek and Highland, Tex. Results merited an order for five

150 feet at high water. This great lift was completed September 20th and the last pin was driven, securing the suspended span in place. Total length of steel work is 3239 feet, with 1800 feet the distance, center to center, of the main piers. Trains 43 and 44, connecting with the *Maritime Express,* and 51 and 52 use this bridge.

6

GIVE *the origin of the moniker* High Brown *applied to local trains 195-196 on the Grenada District of the Illinois Central.*

Only one of the many familiar nicknames given to freight trains on the IC, this title was conferred on the Memphis-Grenada rattler more than a generation ago by E. M. ("Boots") Carr, now Transportation Inspector of the Memphis Terminal. In 1916-17, when first employed by the railroad as clerk at Nonconnah's A Yard, he dubbed train 172 the *High Brown* because of the large number of negro field hands who rode its cars without tickets. Mississippi highways were primitive and autos a rarity, so they relied on rail transportation to Memphis and its glamorous Beale Street. There were always a large number of non-paying passengers, ranging in age from fourteen or fifteen to sixty or seventy. They merely went for the ride, never disturbing anything. On Saturdays they would almost cover the top of the train. Carr coined the name, Yardmaster Spencer, who first called Carr "Boots", liked it, and then others adopted it. When the merchandise run came off, the name was transferred to the local freight on the same district, and has been retained ever since, although its passengers disappeared years ago.

Trainmen around Waterloo, on the Iowa Division, call CC-6, the dispatch meat train from Council Bluffs to Chicago, the *Pork Chop*. This is one of the fastest freight runs on the system. Train WC-2, its predecessor, between Waterloo and the Windy City, was known, even to non-railroaders, as the *Mae West*. This due to the fact that there are enough curves between Dyersville, Iowa, and Scales Mound, Illinois, to make eleven complete circles! Another Iowa Division hotshot with a distinctive handle is AC-2, which speeds daily from Albert Lea, Minnesota, to Chicago. This fast freight has been called the *Apples*, ever since it was inaugurated to carry a heavy tonnage of apples from the Pacific Northwest. The IC receives the train from the Minneapolis & St. Louis at Albert Lea and takes it to the Chicago Produce Terminal.

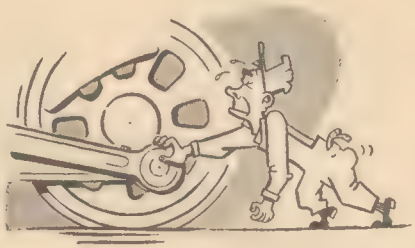
On the Kentucky Division a local freight between Paducah and Memphis is known as the *Bull Run*, a colored brake-

man, Mose Williston having christened it that when it was put on to pick up livestock at stations in the Fulton District.

The famous MS-1, between Chicago and Memphis was known as the *New Deal*, for many years, due to the fact that the all-merchandise train was a new development in railroading when it was introduced in 1937. The New Deal administration in Washington was also at its height then. Now this manifest is simply called MS-1, short for *Merchandise Special*. For several years old CD-7, a popular dispatch run between Chicago and Jackson, Tennessee, was well known as the *Sally Rand*.

Several dispatch trains on the IC carry nicknames based on abbreviation of the terminals between which they run. Thus CN1- (Chicago-New Orleans No. 1) is *Cousin Nelly*, and between East St. Louis, Illinois, and Jackson, Tennessee, SJ-1 is called the *Smoky Joe*. Sometimes crews working south out of North Cairo refer to the same run as the *Son John*. SM-3 between East St. Louis and Memphis has been dubbed the *Smoky Mountain*, and the *Bear Cat* identifies BC-4, linking Birmingham with Chicago. Trains 541-542, local freights between Tutwiler and Yazoo City on the Sunflower District of the Memphis Division, derived their classic name *Yellow Dog* from Yazoo Delta, title of the original logging road that was incorporated into the Yazoo & Mississippi Valley.

The clean-up freight between Gwin, Mississippi, and Memphis has been called the *Ripper* for many years. Back around



WHICH WAY?

Suppose a man were strong enough to move a locomotive. Suppose further that the locomotive had stopped with her main rod at its lowest point and that the man, in order to move the engine a few feet, pushed forward on the back end of the main rod, as shown in the picture.

Which way would the engine move—forward or backward?

See page 69

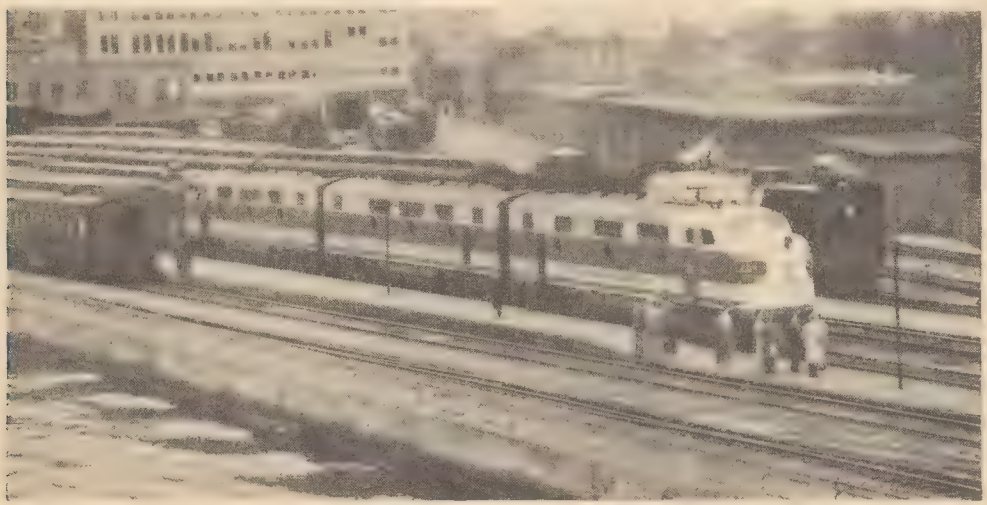


Photo from J. N. Lowe, 205 Wilbrod St., Ottawa, Ont., Canada

Diesel trials north of the Great Lakes. Wedged in between steamers, General Motors' 754 prepares to leave Ottawa for Montreal, a test run for Canadian National

1919, Conductor Gaerig, now retired, said to the Gwin dispatched, after catching this run several times in a row: "I'm ready for that Rip Track Special." This referred to the fact that cars destined to the rip or repair track must move very slowly due to their mechanical defects. Another drag, nicknamed because of its crawling pace is the *Mule,* the Louisiana Division's turnaround local between Jackson and Canton, Mississippi, twenty-three miles to the north. Although the daily mileage of Trains 45-46 is small, the crew performs a lot of switching.

Photo from Harold A. Craig, Alexander, N. Y.

No less dated than the sectionmen's derbies is the New York Central's 1885 track layout at Batavia, N. Y. Besides the light rail and crossover, Batavia boasted a sign board that timed the passing of the last train and a signal tower with only nine levers—no crossover switches, no means of communicating with the swtichmen

7

PLEASE *print a brief history of the Marinette, Tomahawk & Western. I understand the road never reached Marinette.*

Incorporated in Wisconsin October 31, 1912, the Marinette, Tomahawk & Western Railroad purchased the lines formerly owned by the MT&W Railway. It at one time leased 19.87 miles (from Tomahawk to Harrison and from Antigo Junction to the South line of Township 34) to the Tomahawk & Eastern Railway, but the lease was surrendered on December 31, 1919, and operation of the road from Antigo Junction to South line of Township 34 discontinued. Lines listed in 1942 extended from Tomahawk to Harrison, 13.48 miles; Tomahawk to Bradley, 5.31 miles; Jersey City to Wisconsin Dam, 4.84 miles; total, 23.63 miles. Sidings, 6.34 miles. Track is standard gage, laid with sixty-pound rail. Equipment listed in 1924 consisted of three locomotives and fifty-five cars, the latter grouped as follows: passenger, 1; combination, 2; freight (box, 11; flat, 39; caboose, 1), 51; service, 1. Three locomotives were still listed in 1942, but rolling stock owned had dropped to twenty-seven. The MT&W is controlled by the Bradley Company through ownership of entire capital stock. In 1947 the 9.40 miles of line be-

tween Harrison and Kings was abandoned and taken up.

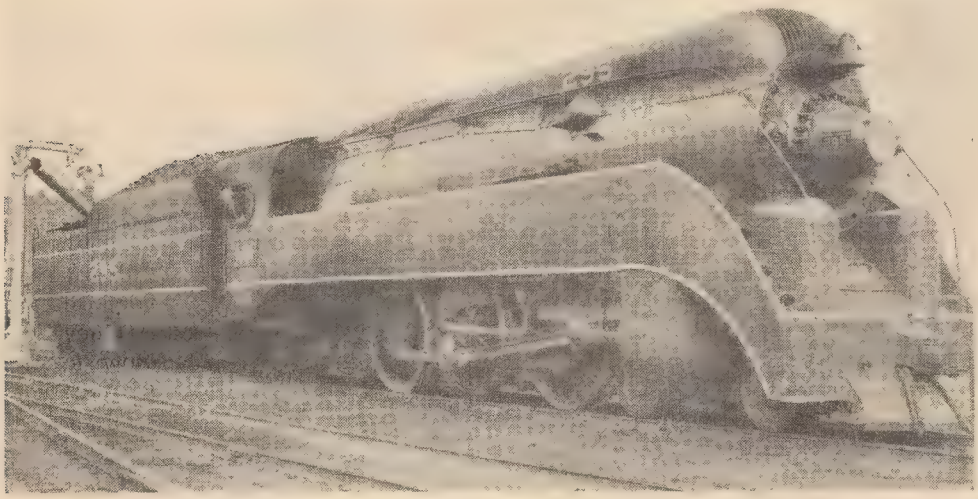
8

DESCRIBE the Young valve gear.

Designed by O. W. Young, this motion consists of two valves for each cylinder, operating alternately as inlet and outlet and driven by the Corliss wrist motion, used in connection with the Williams shifting link. An original device is provided for correcting the irregularities in lead; either a constant or slightly increased steam lead for the shorter cut-offs can be obtained and an excessive pre-admission of steam avoided. The exhaust lead by this device is caused to increase as the cut-off is shortened and permits an

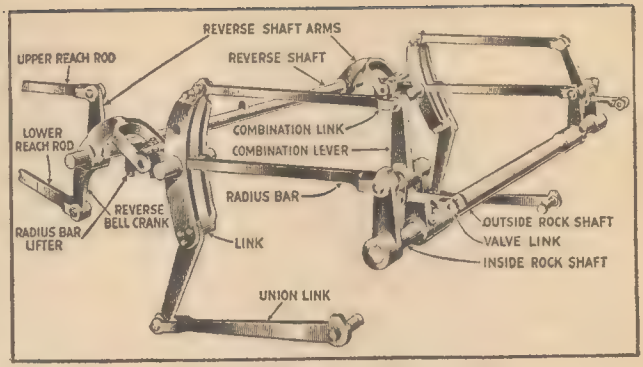
New Haven's 60 passenger-freight Diesels added their quota to last year's total 54 million Diesel train miles. *Above*, triple-unit 0400 freight gets its hoppers rolling. *Below*, L&N steam continues the fight. Number 295 draws water at Louisville, Ky. for her record-breaking jaunt with *The South Wind* to Montgomery, Ala.: 489 miles without a fuel stop

Photos from New Haven and R. L. Kirkpatrick



exhaust clearance for a short cut-off.

The valves consist of cast iron strips outside the exhaust cavity and partitioning the live from exhaust steam. The strips are free to move towards or from their seats, and are independent of each other. Each strip follows its own individual path of travel and adjusts itself to any irregularities in the seat over which it moves. The valve body or carrier is journaled at each end and its weight is supported entirely clear of the valve seat, the only weight on the seat being that of the strips.



9

WHEN *were enclosed observation platform cars introduced?*

In 1909, the Burlington innovated the glassed-in solarium.

10

SUPPLY *information on steam locomotives ordered in the United States and Canada during 1947.*

Purchaser	No.	Type	Service	Tractive Effort	Delivery Date	Builder
United States						
Alabama Power Co.	1	0-4-0	Switching	15,300	Mar. '48	Porter
Celanese Corp.	1	0-4-0	Switching	15,800	Dec. '47	Porter
Chesapeake & Ohio	5	4-8-4	Passenger	81,800*	Mar. '48	Lima
	5	4-6-4	Passenger	64,700	1948	Baldwin
(fireless steam)	3	0-6-0	Switching	29,400	May '48	Porter
	15	2-6-6-6	Freight	110,200	July '48	Lima
	30	0-8-0	Switching	.....	1948	Baldwin
Norfolk & Western	5	2-8-8-2	Freight	126,838	1948	N&W
	5	2-8-8-2	Freight	126,838	1948	N&W
Penna. P'wr. & Light	2	0-6-0	Switching	32,000	Apr. '48	Porter
Pittsburgh & Lake Erie	7	4-8-2	Freight	67,125	Mar. '48	American
Canada						
Canadian Pacific	6	2-10-4	Road	89,200*	1948	Montreal
	30	4-6-2	Road	34,000	1948	Canadian
	10	4-6-2	Road	45,000	1948	Montreal
	10	2-8-2	Freight	57,500	1948	Montreal
Pacific Great Eastern		2-8-2	Road	40,000	Oct. '47	Canadian

*Equipped with booster.

WHICH WAY?

Answer to question on page 66: The engine would move forward if the man stood on the ground as shown.

If the man were able to lean down from the gangway, bracing himself against the tank, and then push forward on the main rod in its lowest position, the engine would move backward. Don't believe it? Well, then try it out on a model engine. Remember, your strong man is standing on the ground. *P.S.* Don't feel too badly, if you missed. Those who know nothing about locomotives will nearly all say, "Why forward, of course." Those who know something about them, generally get the answer wrong.

From G. W. O'Connor

Locomotive of the Month:

6800 Horsepower Virginian Electric

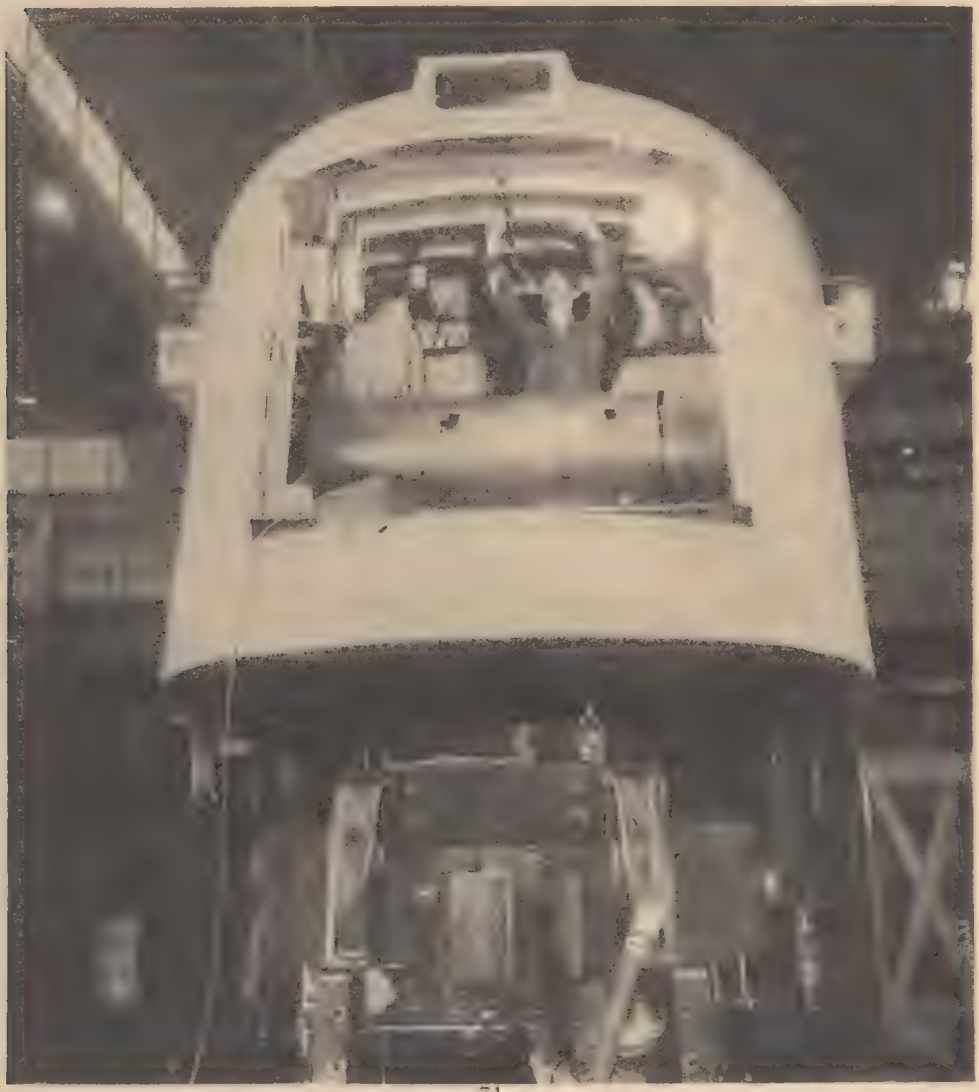
More than a year ago, we gave you a preview of the four giant, two-unit electric locomotives scheduled for construction by General Electric for the Virginian Railway. Delivered in January and February of this year, they are worthy of further attention, as the most powerful, continuously-rated juice jacks to be operated in the United States. Unlike predecessor Virginia power which converted 11,000 volt, single-phase A.C. power into three-phase A.C. current for the traction motors, the new engines transform the same catenary current into D.C. power for 16 traction motors through the medium of two 4000-horsepower, synchronous motor-generator sets

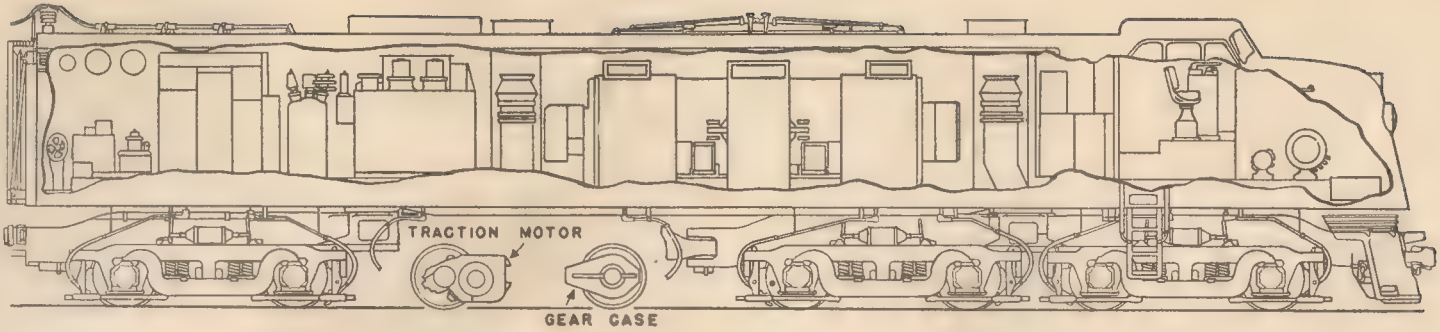
At top of page: Breaking away from traditional engine bed construction, new Virginia electrics employ interchangeable power trucks, simplifying shopping and replacement of parts

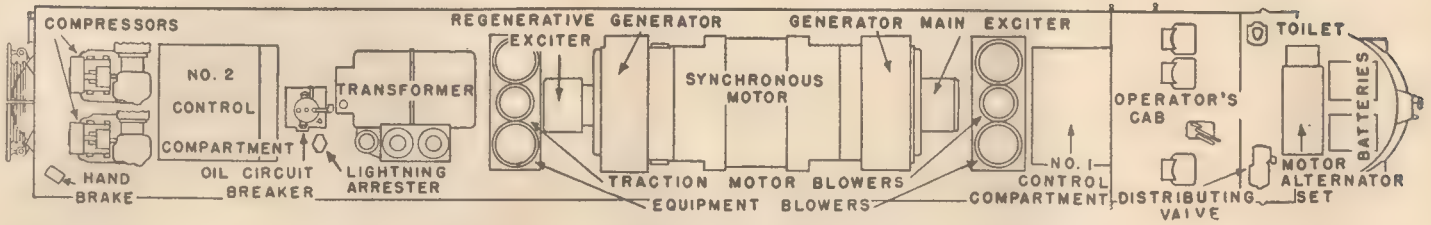
At left: Welding nose section at GE's Erie, Pa., plant

At Right: All main power switches are of electro-pneumatic type. The master controller has speed-, braking-, weight-shift compensation, and reverse handle—all incorporated in one unit. Oil circuit breaker, handl'ng 11,000 volt trolley circuit, two high-speed circuit breakers and two overload relays give protection between traction generators and the traction motors. Ground detection and wheel slip relays are among further features assuring reliability and safety of operation

Below: In streamlined nose section of the cabs are located miscellaneous equipment including motor alternator set and batteries. Illuminated plates carry locomotive numbers *125* through *128*

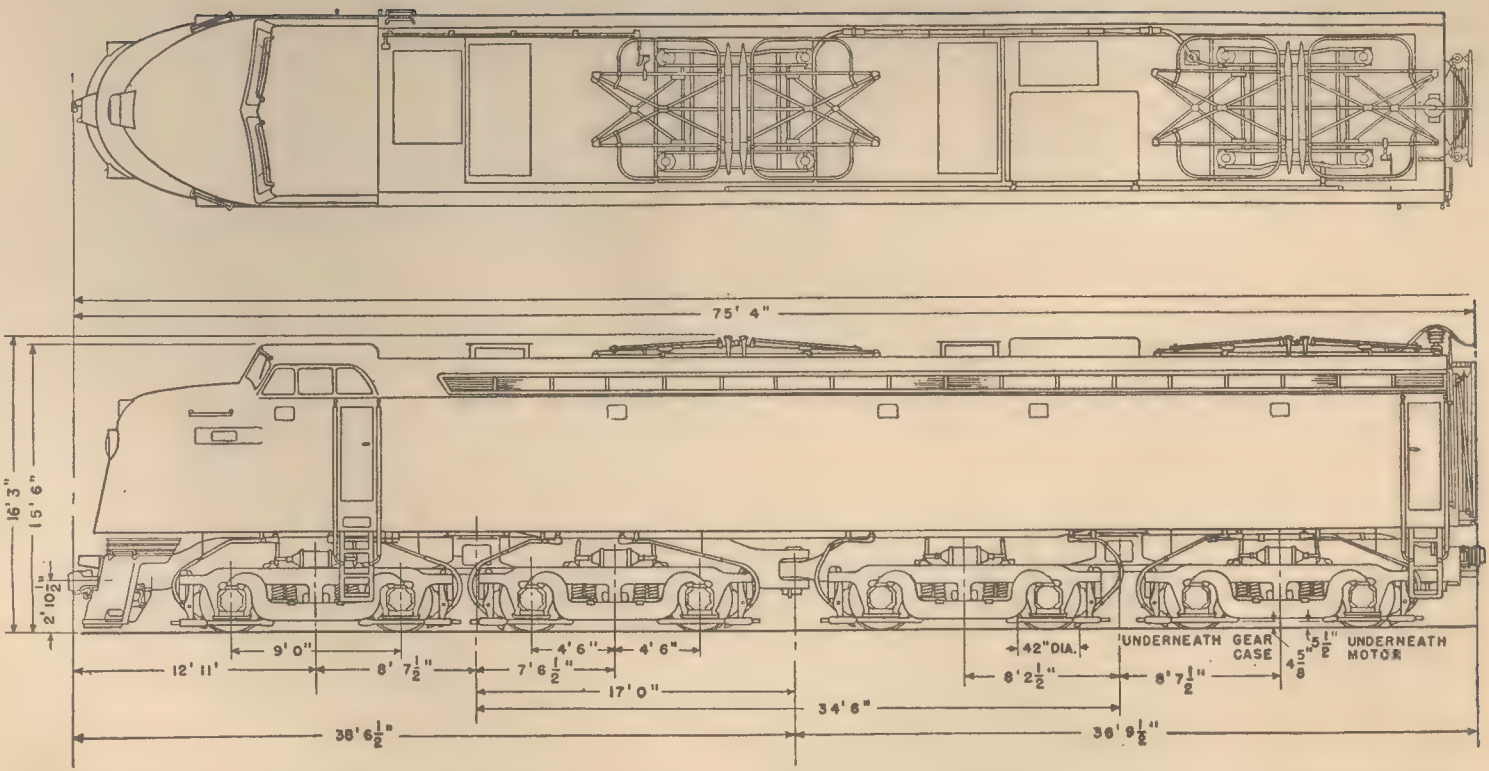




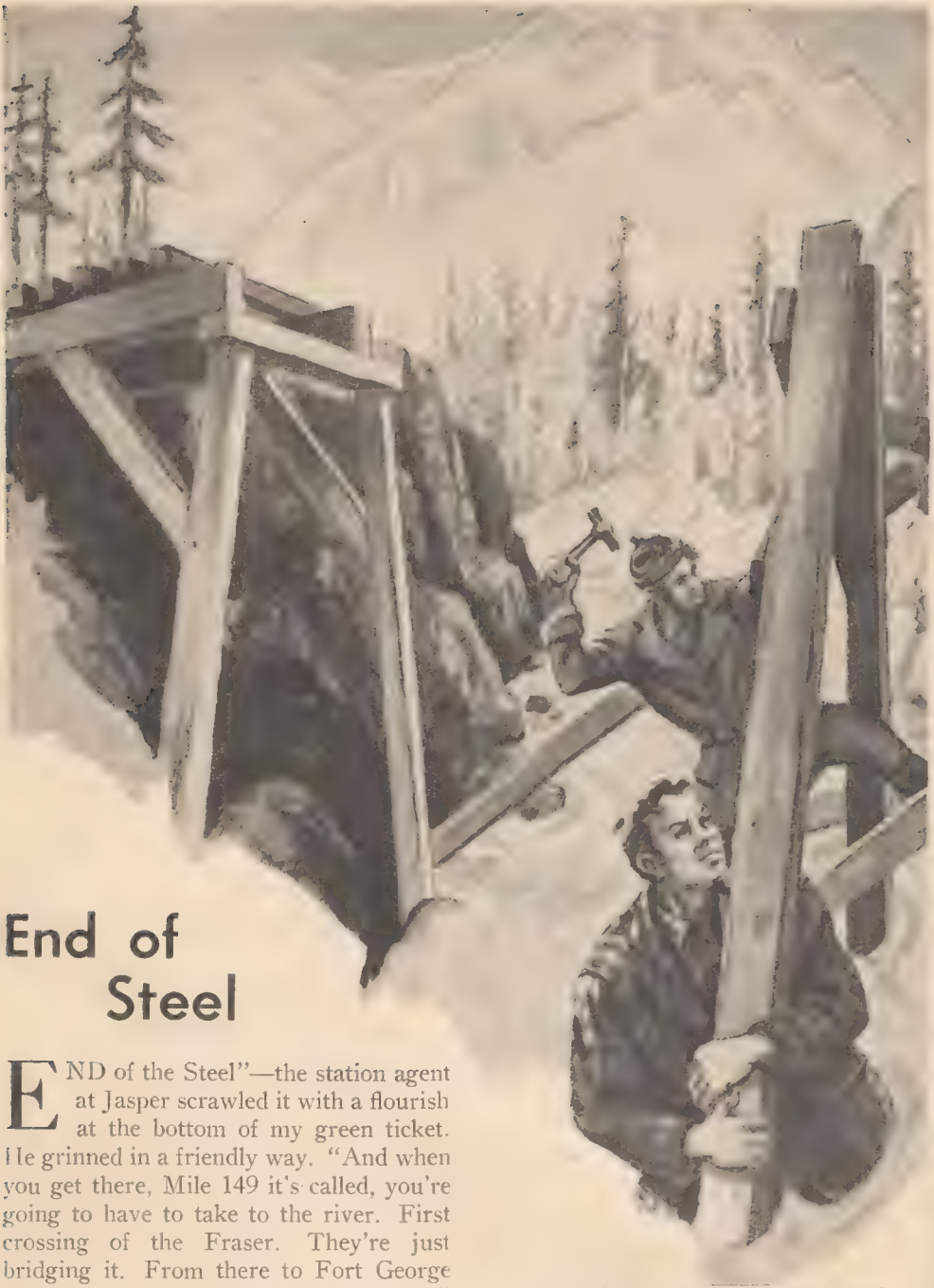


Specifications

Number	125-128
Wheel Arrangement	2(B+B)—(B+B)
Driving Axles, Number	16
Driving Wheel Diameter	42
Gear Ratio	70/17
Weight, per Driving Axle	62,500
Weight, Locomotive	1,000,000
Horsepower	6800
Tractive Effort (Starting)	260,000
Tractive Effort (Continuous)	162,000
Speed, Continuous Rating	15.75
Speed, Maximum	50
Length, Locomotive	150' 8"
Wheel Base, Total	133' 8"
Height Over Cab	15' 6"
Width, Over Cab	10' 4"



Locomotives which can haul 10,000-ton coal trains at moderate speeds over heavy grades, unassisted, are only a part of Virginian's post-war electrification improvement program. GE is also supplying a new 10,000-kilowatt steam turbine generator, new switchgear, motor controls and transformers

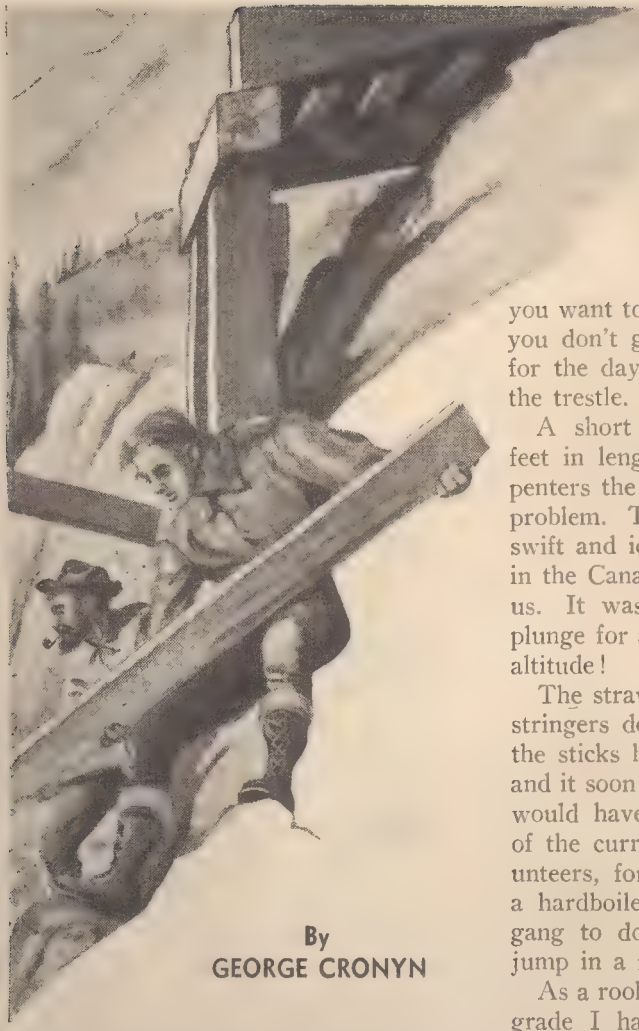


End of Steel

"END of the Steel"—the station agent at Jasper scrawled it with a flourish at the bottom of my green ticket. He grinned in a friendly way. "And when you get there, Mile 149 it's called, you're going to have to take to the river. First crossing of the Fraser. They're just bridging it. From there to Fort George you'll either have to hit the grade trail or work your way down on a flatboat. Rough going, Buddy, but you look like you could take it!"

"Thanks a lot, Mister!"

I was pleased not to be taken for a tenderfoot from the States. In fact, I felt that I was a seasoned railroad work plug —seasoned, that is, by three weeks of day labor in a grade camp of the Grand Trunk,



An Incident in the Building of the Grand Trunk Railroad

By
GEORGE CRONYN

which was racing the Canadian Northern down through Yellowhead Pass toward their distant terminals on the Pacific. I elected to stick with the Grand Trunk construction crews, and stick I did until eventually I worked my way clear to Prince Rupert on the West Coast. But that's another story.

I had just left a camp up in the pass where my jobs included everything from digging post holes for a mule corral to setting stringers for a temporary wooden trestle.

In the building of a great transcontinental line, as I soon discovered, there are all kinds of work to be done and if you want to stand in with the straw boss, you don't grouse about your assignment for the day. That was how it was with the trestle.

A short span, not more than thirty feet in length, for the sawyers and carpenters the little bridge was an awkward problem. The stream to be crossed ran swift and icy, straight from some glacier in the Canadian Rockies that surrounded us. It was waist-deep, not an inviting plunge for a September afternoon at that altitude!

The straw boss tried floating the hewn stringers down, but he was no engineer, the sticks had been cut a few feet short, and it soon became apparent that a trestle would have to be planted in the center of the current. The boss called for volunteers, for there are some things even a hardboiled straw boss can't order his gang to do, and one of them is to go jump in a mountain brook!

As a rookie among the oldtimers on the grade I had been relegated to a lowly position, above that of mess hall busboy and below the blacksmith's helper. Now was my chance, and without removing my shoepacks, corduroy pants and heavy mackinaw, I plopped into the rushing water. The chill struck to the bone, but I waded out to the center and bravely yelled for timber, hoping that pneumonia was not already setting in.

The straw boss glared at his crew in disgust; then, without batting an eye, he plunged in after me. In ten minutes of battling with the current and the wayward pieces we managed to set up a makeshift trestle and hammer home the first spikes. When we clambered out on the bank and

shook ourselves like wet puppies, the boss turned loose some choice epithets on his men—and cursing was a fine art on the grade!

For that stunt I was not only given time off for the rest of the afternoon, to dry out at my leisure by the glowing bunkhouse stove, but I was also admitted to the fraternity of grade work plugs and could look down my nose at mere bohunks.

It was a good camp and I liked it, but at twenty the urge for adventure may be stronger than the inducement of three squares a day and an assured weekly paycheck. So, on a bright autumn morning I went to the camp clerk and asked for my time.

"Leaving us, eh?" he said grumpily. "That's the way with you kids! No sooner do you learn a good job than you want to quit it! Where you heading?"

"West," I said.

"Well," he admitted, "there's plenty of work on the grade, clear to where the western division starts. In between, there's around three hundred miles of unfinished grade. The half-way point is Fort George, just west of where the Fraser and Nechako meet. In miles it ain't so far out there, but when you hit the river you'll know you're a long way from home!"

He looked over my traveling gear with a critical eye. "You're carrying too much weight, Son," he said. "You've got a suitcase and a three and one-half point Hudson's Bay Company blanket. Better trade 'em for a good packsack and a small bedroll. When you're on the grade you travel light! I'll make an even trade with you, if you want."

I made the trade, pocketed the silver and a few gold pieces due me, and set out for the Jasper station with a light heart. A few hours later I was on the mixed local.

IT WAS a toy train, consisting of a small locomotive the size of a yard engine, vintage unknown, two ancient, light coaches, and a dilapidated freight car that might have survived from gold rush days. The reason for the light rolling stock was evident after we dropped slowly down from the pass to a wide stretch of level country. Until the rails pushed through, this was a primitive wilderness, roadless and almost trackless, a desolate region of pine forests and muskeg.

In this area little rock or gravel was available for a roadbed, and without waiting for the gravel trains to lay a solid foundation, a grade of sorts was built—but what a grade! Logs, brush, and other odds and ends were packed down as well as they could be, ties were dropped on the makeshift fill, and the rails were spiked to them, roughly following the line markers, but only roughly! As our train bobbed up and down across the muskeg, at an average speed of ten or twelve miles an hour, I was reminded of the roller-coasters at Coney Island and wondered if we could possibly make the end of the steel without ditching. The worst was yet to come, however.

After six hours of traveling on brush fill our train reached the south bank of the Fraser River, which the grade followed as far as the first crossing at Mile 149. And it was along this stretch of twenty or thirty miles that the hazards of riding over new construction were painfully obvious. For the grade had been gouged from the red clay of the river bank, leveled to specifications, but with only a narrow right-of-way. On this cow-path—or so it seemed to me—ties and rails were laid down with no pretense of ballast, and work trains were run on this precarious roadbed.

Our train crept at a snail's pace, and the sight of green water foaming and boiling below was hardly reassuring. Neither were the casual comments of my fellow travelers, some of whom were hardened to this mode of locomotion.

"Now, right there," said one of them to his companion, "is where the freight went in the drink last week! See them flatcars stickin' out of the water? They'll

stay until the rails'll take a wrecker! The engineer and brakie hopped off when she started to roll so they didn't get nothin' worse'n a good wettin'."

It was twilight when we arrived at the abrupt end of the track, on a high embankment overlooking the dark waters of the mighty Fraser. Ahead of us the steel skeleton of the new bridge was lit by acetylene flares, and the din of riveters indicated that a night shift was at work

There was no station, not even a platform. Passengers grabbed their duffle and packsacks, let themselves down to a narrow footpath beside the tracks, and slid a dozen feet or so to the bottom of the slippery bank.

The temporary railhead, Mile 149, was one of those odd settlements that flourish briefly when a railroad is a-building. It was a helter-skelter collection of frame and log structures, all of them raised on stilts, out of the prevailing mud. A single corduroy road straggled along the river bank. A boardwalk of rough-hewn planks served as a passageway for the hundreds of railroaders, construction men, river men, blanket stiffs and others of the floating population, who milled and drifted from one acetylene-lighted building to another.

When I inquired about sleeping quarters the answers were discouraging. "You might locate a six feet of space somewheres, but you can't count on it." "There's more bedrolls in this-here town than there is floors to lay 'em on!"

A chance acquaintance in one of the numerous eating places offered a solution to my problem. "If you're working your way down river, Buddy," he said, "better find yourself a flatboat right quick. If you're hired, you'll have a spot to sleep in for the night. Won't be too comfortable, but it'll serve."

As soon as I finished the meal of ham and eggs, which came to two dollars, I hastened to take his advice. Stumbling down the river bank I found a string of flatboats tied up, end to end, waiting to cast off in the morning. At the first one where I applied for the job of deck hand I was lucky enough to find a willing pilot, whose name I learned was simply "Big Bull."

Big Bull, an amiable giant and an old hand on the river, had little to say to his crew but the reason for his nickname became apparent when, on later occasions, his bellowing voice rose above the tumult of rapids and "white water."

"I'll take you on, Boy, at five a day and found," he told me. "It's a six-day voyage and you can't jump ship! You'll work the bow sweep, along with Smitty the Yank. And don't ever forget one thing—I'm the pilot of this craft, and what I say, goes!" He pointed to the cargo, which was covered with immense tarpaulins lashed to the gunwales. "Baled hay. It's hard, but it's warm. You can snug down on the tarps anywhere you want, only don't go walkin' in your sleep!"

Thus, for me, began an epic voyage aboard the *Suzy May*. Our boat, like her sister craft, was destined for a short life. At South Fort George she would be broken up to furnish building materials for that Fraser River port and for its neighbor, Fort George, a few miles north on the Nechako. To replace these short-lived vessels, new ones were constantly under construction at Mile 149.

At dawn we cast off, and poling the boat toward the middle of the wide river, we began to drift leisurely downstream. Our motive power was the current, and Big Bull knew every trick of getting the most speed from his friend and antagonist, the Fraser.

Once in the current there was little to do except to follow the occasional commands of the pilot—"Starboard! Hold her! Let her ride!" All day we drifted, the monotony of the voyage broken only by the conversation of the deck hands, paired at the long sweeps fore and aft, and by the three meals that were promptly served and devoured with ravenous appetites. At night we nosed into shore and tied up. A gangplank was run out to the bank, a roaring campfire built, and our crew was joined by others from similar flatboats.

For an hour there would be smoking, yarn-spinning, and endless anecdotes of roistering life in towns and camps along the river. Generally, the stories were at the expense of railroaders, whom the river men held in lordly contempt. "Work plugs!" they said. "Tied to picks and shovels! Why, a bloke who'd muck around on the grade is no more'n a hired hand of the railroad bosses!"

ALL along the river we saw the building of the grade in progress—mammoth construction camps, steam shovels, pick-and-shovel gangs of bohunks—and sometimes we caught the dull boom of explosions where cuts were being blown in the heavily timbered bluffs.

On the third, however, there was unusual activity aboard. "We're coming into the Grand Canyon of the Fraser," Smitty the Yank explained. You'll need all the nerve you've got, Kid! But you can bet on Big Bull to take us through. He's the best dawgone pilot on the whole damn river!"

Big Bull gave orders; the cookstove, bedrolls, and all other loose gear were stowed away under the tarps. The tarps were lashed down snugly, as though in preparation for a gale, and the pilot gave every member of the crew a final chance for a smoke as the *Suzy May* rode gently toward her last great adventure.

The widening river opened out into a lake-like expanse enclosed on its far side by sheer walls of rock that marked a range through which the stream had cut a channel millions of years ago. For a moment I could see no opening in the granite face of the cliffs, then I made out a dark gash in the gray walls, a hundred yards or so in width.

Where the river plunged through this outlet there was a white line of foam, a stationary wave as high as the deck of our boat! The *Suzy May* picked up speed as we neared the entrance to the canyon. "Steady!" roared Big Bull. "Hold her head on! Hold!"

For a brief moment we held the sweeps motionless, buried in the swift current, our blunt prow pointed directly at the white breaker and the black chasm beyond it. Then we struck! The flatboat shuddered from bow to stern, a sheet of icy water swept across our deck, as we passed into the canyon. From then on, for the next few minutes, I was conscious of nothing but the wild crashing of waters racing through the narrow passage and above their uproar the bellowing of Big Bull: "Port! Port! Hold! Starboard! Port! Steady!"

The Grand Canyon is shaped more or less like a corkscrew, through which the river twists and boils at about twenty knots an hour. It took a good pilot to bring one of these cumbersome craft through safely, although the running time was only three minutes. Earlier that season several flatboats had been lost.

After we emerged from the Grand Canyon we ran the Little Grand Canyon, where the hazards were less, except for a sizable whirlpool which we skirted cautiously under Big Bull's direction. In another twenty minutes we had left the two canyons behind and were working our way into a stretch of river where the only dangers were rapids and sandbars.

The last three days of our voyage were without incident, and on the sixth day we pulled into the South Fort. It was good to be on dry land again, and to feel the jingle of hard money in my pockets. After we left the office in town, Smitty confided a bit of news.

"You didn't get a bonus for this trip, Lad," he said, "but you got good money for it."

"What bonus?" I asked.

"To keep our mouths shut, kid. You see, Big Bull's a right smart pilot and sometimes he takes on a special cargo. We carried baled hay, all right, but there was a layer of booze at the bottom of it! Being a greenhorn, you wasn't in on it."

"I'm satisfied," I said. "And now I'm hitting for the first camp out of Fort George to get me another job!"

Smitty looked at me in disgust. "You're just a natural-born work plug, Kid!" he said as he turned back toward the river.

Not On the Wheel Report

By JOSEPH EASLEY

"Put my hat 'n' gloves on, Ma'am . . . and *TRY* it thatta way!"

A Taste of Railroading

By TOM ROONEY

MY FIRST job connected with work around cars was as a part-time conductor for the Milwaukee Electric Railway & Light Company, while a student at Marquette School of Journalism back in 1920 and '21. . The "SM," as the railway was popularly called, competed with two other traction companies operating city and interurban service for this Wisconsin metropolis, and it did a brisk business. Its student conductor dovetailed with its economics by helping out during the morning and evening rush periods. The South Milwaukee Line ran mostly double track to Carrolville, about fifteen miles to the south, and employed several dozen lads from Marquette, Milwaukee School of Engineering, and State Normal. This was a highly industrial section which included such vast enterprises as Cudahy Brothers Packing Company, Federal Rubber, and the DuPont Chemical Company.

My watch was ten minutes off. "Better toss that tick-toy into Lake Michigan," warned the oldtimer

The road's employment manager hesitated when I presented myself to him for employment. Lacking several months of being seventeen, I had a complexion like Mary Pickford. But I drew my skinny six-foot frame to full altitude, looked the man in the eye and told him I was "going on twenty." He gave me a minor's release to be signed by my mother. I was in the clouds of jubilation, but I was soon to learn that rolling out at four a.m. on

frosty mornings was certainly no picnic.

The crew clerk issued me a uniform cap, timetable, book-of-rules, switch key and trip-sheet holder, together with a brief lecture on safety and politeness. Then he turned me over to a short, roly-poly oldtimer for several breaking-in trips. This grandee was dressed in a resplendent gold-trimmed uniform and wore a gleaming stone in his tie that might have been a diamond. "What time yuh got, lad?" he rasped, pulling out a big gold watch.

I produced my dollar timepiece and it proved to be ten minutes in arrears.

"Well, the first thing you should do," he said with a crooked grin, "is toss that tick-toy in Lake Michigan. Okay, let's go."

We descended the steps from the Trainmen's Room into the darkness of early morning. In a small shanty he showed me how to prepare my equipment for the road. There were red and white lanterns to be cleaned, and filled and lighted; a red flag, flares and torpedoes to be checked in a small case. A fellow several years older than I came in and busied himself in a similar manner. He took down two big Adlake markers and showed me how to light and hang them on the rear end. This young man, I learned, was the trailer con on our two-car train.

The three of us looked about for our train and finally found it buried behind a line of yellow wooden cars. The oldtimer entered the numbers—Motor 1120, Trailer 1006—on his trip-sheet, and I aped his movements, following him as he made his inspection. He turned seats, tried bell-cords, examined the sandbox, couplings and airhoses. He took his time about a multitude of things, although I knew we were about ready to depart. Our overalled motorman had made his appearance, and the cars ahead of us were beginning to clang out into the darkness.

"We have overlooked a very important item," said oldtimer suddenly. "Know what it is?"

I shook my head and he beckoned me to follow him. In another small shanty he pointed out a row of huge fareboxes.

"Get one and hang it up in the head car," he ordered. "Never go on the road without a farebox or you might land in the hoosegow."

Most South Milwaukee trains were two-car units, a motor and a trailer. The trailer had no power or generator, deriving its juice for lights from a jumper running from the head car, or motor. The airhoses were the standard railroad type and the couplers resembled those used on steam roads. But they were low-slung and rested on greasy quadrants.

The interior of the motor car was a study in gaudiness. Originating in the Gay 90s, it had carpeted floors, varnished walls and ceilings, numerous globed light fixtures and gleaming brass hat racks and coat hooks. Large mirrors were hung outside a lavatory on each end of the car, reflecting the green plush seats and creating an impression of commodious grandeur. These lavatories, unlocked when the train had passed City Limits, were without plumbing. Each had an oval window of stained glass which suggested the magnificence of a cathedral.

The trailer, in which I was doomed to spend most of my working hours, was far from ornate. It boasted no mirrors, the seats were of straw, the floors bare as a barn. Illumination was provided by small Edison bulbs and the lavatories fitted with only plain frosted glass.

Heating units on these old cars were pot-bellied stoves which burned hard coal. They were the cause of many an altercation between the public and the student conductors. I learned to blame the heater's recalcitrance of operation on slate in the fuel; but now and then some ingenious man or woman rider would step up and manipulate draughts and levers, causing the device to turn red around the navel. Then warped windows would squeal up, amid murmurs of dissension, cold breezes, flying snow and newspapers. It was all very embarrassing.

AFTER ALL these years I can still hear the oldtimer voicing that long-drawn *Allaboard*. You'd think he was about to start the *Century* or *Broadway Limited*. Racing men with lunch buckets caught a handle as we pulled out of the shed. We rumbled along the streets, picking up passengers at every corner, so that long before we reached the suburbs, our train was packed like a box of figs. My instructor, unmindful of the oppressing jam of humanity, called the stops unerringly, uttering standard phrases: "Step forward, please, watch your step, please."

The man in the trailer began giving bell cord signals and I relayed them to our motorman. One bell meant stop at next corner or station; two indicated proceed; three meant stop-emergency. I learned that one bell when given by the motorman meant that he wanted trainman to come forward and that three bells, given when the train was standing, was a signal from the conductor to back up.

The most thrilling part of the first student trip was to learn that suburban railroading was not all stop-and-go. Several times before coming to South Milwaukee, we wheeled over fast stretches of fenced track, one of them more than two miles in length.

Here the motorman wound the controller to full speed, sounding his croupy air-whistle with abandon. The wheels spun over the rails and the car swayed in rhythm. Crossing gongs sounded sharply and then faded behind; freight cars in sidings roared at us as we flew past. Here was railroading; more exciting than the stories in magazines.

Suddenly the lights went out and there was a deafening boom overhead. The skipper muttered and started elbowing his way to the door. Passengers droned about the trolley being off. Somebody hollered, "I'll get it!" The lights flicked on and off as the volunteer man made several stabs with the pole in the darkness. Soon the lights came on with a steady glow, the man called an "okay," and we were speeding again without losing a minute's time for a stop.

At the outskirts of South Milwaukee we headed into a pocket through a spring switch and the trailer man cut off his car. "Watch him," advised the oldtimer. Next we pulled up to a rigid switch leading to the main line and waited.

Soon a motor car appeared from the direction we wished to go. It slowed at the switch and the motorman passed down a green steel shingle. This was a form of clearance and showed that there was no traffic on the single track ahead.

I unlocked and threw the switch. Our car rolled out beyond it and I closed it and snapped the lock. Two bells and we were off on the three miles of single track leading to the end of the line. I looked back and saw that the car we had met was backing onto the trailer we had left behind.

At the end of the line, I helped change ends. There was a trolley to pull down and secure, another to be unhooked and put on the wire. The seats had to be turned and the headlight and farebox moved to the other end.

The big farebox had to be handled with care. It was equipped with a telltale, which was nothing more than a steel marble nestling in a small cup. If the farebox were moved out of the normal straight-up position this marble would hop out and point a figurative finger of suspicion at the man handling it. He would be duty-bound to make out a written report to the division superintendent, stating there-in the time and circumstances relating to the irregular incident. Two chances to one the Old Man would have him on the mat for a brief visit.

The big fareboxes on the old "SM Line" often held considerable currency as well as tickets. Fares ranged from seven cents to a quarter and the boxes were only emptied once a day. They were the loot of more than one bandit. Sometimes a drunken or unknowing individual would drop a big bill into its yawning jaws and expect to be given change. Instead, the man would receive a refund form from the conductor which could be negotiated at the main offices in Milwaukee. This was quite a damper to his spirits usually.

That morning the regular conductor made me do most of the work in picking up the trailer left by the motor we had met at the switch. A good instructor, he knew the best way to learn a movement was to execute it. He waved me aside and made the other boy make the coupling after I had missed the first joint, but hovered nearby as I connected the bellcords, electric jumper and airhoses.

Our run into the city was made interesting by the appearance of a number of good-looking Polish girls. The oldtimer called eagerly to them—"Milwaukee passengers in this car!"—but they ignored his invitation to the green-plushed conveyance and walked toward the steps of the trailer, where a good-looking youngster of twenty was standing. The old fellow was quite crestfallen when a particularly stunning brunette crinkled her nose at him and entered the car behind.

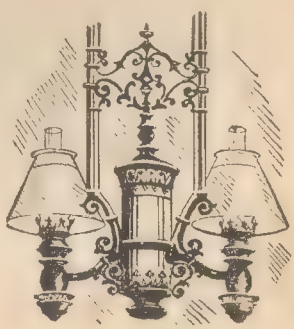
"Can't understand what the girls see in some fellahs," he growled while adjusting his gleaming tie pin. "Watch your step, please. . . . Step forward, please."

At Milwaukee he had me cut off the trailer without assistance. My hands worked eagerly for his approval, and I was aware that his sharp eyes were watching me all the time.

"Guess you'll do after another round-trip," he mumbled. "Don't forget to get a watch and learn the streets and stations. So long, Bud. Don't study too hard. See yuh this evening."

I left happily for home and a hearty breakfast of ham and eggs. In school that morning I dozed during Professor Walt Abel's discourse on the inception of cartoons into journalism—Ben Franklin's severed snake—*Unite or die*—Tom Nast was the first cartoonist to get an assignment abroad—

My thoughts wafted to the swaying cars and the sputtering trolley overhead; to the surging commuters and the clink of fares in the box; to Oldtimer and the handsome Polish girls. Above all, to the musical click of wheels on the high iron—an irresistible serenade of adventure.



Aspirin for that headache? Not when the "bee" boys get busy . . .

So You're a Passenger Conductor - - -

SO YOU'RE a passenger conductor now!" exclaimed my school teacher cousin. "What does a passenger conductor have to know and do, outside of taking up a few tickets?"

"Too much," I answered. "Let us talk of something else."

"But I am curious," she persisted. "I want to know."

"Take too long," I protested. "Some day I'll write an article on it."

Well, here goes.

It was in 1942 that Trainmaster L. B. Roberts stopped me outside the yard

By JAMES W. EARP

office at Herington, Kansas. The Rock Island was putting on a new passenger run between Chicago and Dalhart. Three extra conductors were needed. How about dusting off the old uniform of a freight conductor and donning the blue and gold of a passenger man?

"A passenger job in wartime is a headache," I said.

"Aspirin is cheap," he laughed. "Think it over. However, you shouldn't need aspirin. You've spent a lot of time on passenger trains. It ought to be a breeze for you."

I wondered. The prospect of regular hours and a specified period of rest appealed to me. Handling wartime travel was something else. However, when the Rock Island placed their *Southwest Express* in service, I was one of the conductors to pilot it between Kansas City, Mo., and the little town of Pratt, Kansas.

I had been wrong about passenger work being a headache in wartime. That first trip was not one headache but a series of them. Ninety percent of the travel was military; and less than half of this military had ever ridden on a train before their induction into the armed services of their country. This latter half of the military dealt many a trial and tribulation to the overworked conductors. Yet I do not know of any conductor who did not go out of his way to help these inexperienced travelers.

But the real headaches and pain in the necks were the small, yet inevitable, percentage of the military who, from the time they boarded the train until they left it, were a constant nuisance and liability. They were the drinkers and the drunks, the would-be Romeos who tried to force their attentions on any woman who had no one to protect her, not to forget the "smart" boys who roamed up and down the cars in a perpetual stream and reminded you of a bunch of small kids with bees in their pants.

This night was no exception to the rule. As soon as possible after we left

the Union Station at Kansas City, I started my ticket taking. That was the signal for the "bee" boys to get busy. In spite of the fact that passengers were standing in the aisles, they pushed and crowded by with a total disregard of the annoyance they caused others. When they got to me, I blocked their passage.

"Tickets, please," I requested. "Please have your tickets ready."

"We got Pullman reservations," one said nastily. "We're going up ahead."

"There is nothing up ahead for you," I said. "If you belong in the Pullman, I'll have to ask you to go back there where you belong. We're badly crowded as you can see. And you must have tickets."

Three boys produced tickets. I gave them hatchecks and continued on, pushing the three Pullman claimants ahead. In normal times the tickets are the least of a conductor's work. But this was no normal time. Before I had finished the first coach I had a soldier with a Missouri Pacific to Herington, a sailor with a Santa Fe ticket to Hutchison, and two sailor boys on Union Pacific tickets for Los Angeles.

Now, I could take care of these errant travelers, although they were on the wrong train. The four lads on the party ticket for Omaha via the Burlington was something else. I literally threw up my hands.

"How in the world did you get on this train?" I asked. "Don't you know that this is a Rock Island train?"

"The porter loaded us," one spoke up. "What time do we get to Omaha?"

"This train does not go to Omaha," I replied. "And we have no porters on this train except Pullman porters."

"Well, it was a porter who sent us up here," said the spokesman. "And we got to be in Omaha in the morning. Since when don't the Rock Island go to Omaha? They always did when I lived there. How are we going to get to Omaha?"

"I'm afraid that's your problem," I told him. "I'm going to let you off at Lawrence. You can catch the first train back to Kansas City."

It was all I could do. Later on, I learned how the mistake had happened. They had come down to board the Burlington train which was on the track opposite us. Instead of asking for information, they saw an open door and entered. Of course, it was the Pullman. When the porter discovered they had no reservations, he sent them up ahead, never dreaming they belonged on another train. That incident never occurred again. From that night on the rear door of the rear coach was kept locked until the train left the station.

I FINISHED the first coach and wiped a perspiring brow before entering the second. It was almost a must to be through checking the train by the time we arrived at Lawrence. More than half the passengers had been checked when I met up with two very inebriated soldiers who could not locate their tickets, four others who were seemingly dead to the world and a trio who had no tickets at all.

"We belong in the Pullman," one of them said.

"Do you?" I said. "Let me see your claim checks."

"We don't have to have claim checks," another declared.

"You're going to show something to ride on," I informed them. "If you belong in the Pullman, I advise you to get there as soon as possible. These seats are for chair-car passengers."

"You trying to tell us where we can ride?" demanded the mean one. "We'll ride where we please."

I beckoned my brakeman. We were slowing down for Lawrence at the time and he had come back to call the station.

"When we stop at Lawrence, call the M.P.'s," I ordered, although there were none there. "I've got two dead drunks, four just plain dead soldiers and three others as yet unclassified."

The results of my request would have been humorous had I not been more than a trifle peeved. My four unconscious soldiers snapped out of their comas to produce tickets almost before I had finished talking. The two drunks insisted on paying cash fares, and throwing in a

drink gratis. Three vacant seats told me that my Pullman claimants had gone back. Yes, they belonged there. They stayed there. An old army sergeant in charge of them saw to that.

A quick check of the Pullman and I hurried back to my seat for some much needed clerical work. On my way I counted heads, 157 of them. Imagine my chagrin when my ticket collection showed but 153 tickets collected and honored. However, I had no time to do anything about it. The train was stopping at Lawrence.

Twelve passengers got off. Eighteen got on. The "bee" boys were swarming in the aisles and vestibules, making loading and unloading passengers a tedious affair. By some miracle I collected eighteen tickets and gave hat checks to those going beyond Topeka. A recount of my passengers and a recheck of my tickets still failed to strike a balance. Much as I hated to admit it, I had been taken.

Time and conditions did not permit a recheck of the train. My method of handling the hat checks had left me vulnerable. Later on, I'll have more to say about hat checks. The only thing I was convinced of was that there were four drones among the hustling bees who owed me tickets. I said as much to my brakeman.

"You can't get them all," the brakeman commented philosophically. "One man can't work the train alone. Every conductor misses some."

He spoke truly. The missing tickets became so great in number that the company had to put on helper conductors to stem the ever-increasing number of tickets being turned back for redemption by former holders who claimed they had not used them. At that time I was not aware of the flood of ticket redemptions. All I knew was that I had been tricked, and my conductor pride was hurt.

Being pretty sure how the trick was worked, I was ready for all emergencies on my next trip out of Kansas City. A copy of my new hatcheck code was given the head brakeman. He was interested but dubious. If he had been free to help, it would have made matters easier. However, his own duties were too numerous and infinitely more important than a few lost tickets.

As soon as the train left the station at Kansas City, I began my ticket collections. Every passenger was hatchecked. In normal times a conductor seldom hatchecks a passenger getting off at the first station. But these were not normal times.

I was still in the first coach when three "bee" boys tried to crowd by me. They seemed amused when I blocked their progress and demanded tickets. Out came tickets, all round-trip ones to various places. I tore off the going portions, gave them hat checks and the return portion of their tickets along with a little advice.

"Put these hat checks in the holders above your seats," I warned them. "If you move or change seats take these hat checks with you so I won't have to bother you again."

Then I permitted them to pass by. They went to the front end of the coach, stalled around, then came back to push by me again. It was to be the last time I ever permitted passengers to do this. From that time on, once a passenger went ahead, he stayed there until I had finished checking.

BACK in the second coach the fun began almost from the start. A few seats from the front a soldier was curled up, pretending the usual coma. In the rack above was a hat check—the destination Pratt, Kansas. I was using green hat checks that night for passengers going to Pratt and beyond. In the same seat was another soldier who handed up his ticket, was checked and passed by. Two seats farther on, across the aisle, a soldier looked his scorn for conductors in general, when asked for his ticket.

"You got mine in the head car, mister."

"If I did you were given a hat check," I said in my sweetest voice. "You were also told what to do with the hat check. Where is it?"

"You never gave me any. If you did, I lost it. I'm going to Pratt."

"In that case, you lost your ticket," I said. "The fare to Pratt is $6.87."

"I don't care what it is, mister!" the soldier snorted. "You got my ticket once. It was a round-trip ticket. I still have the return portion. You'll not get any more out of me."

He dug into his pocket to produce the return portion. With the ticket in my hand, I backed up to the comatose soldier and shook him into wakefulness. A comparison of the ticket in my hand and the hat check told me all I wanted to know. His indignation made no impression on me. Neither did his derision.

"Get wise to yourself, fellow," he sneered. "You got my ticket in the head car. There is the hat check you gave me."

"I see the hat check," I nodded. "It calls for the going portion of a round trip ticket to Pratt. The ticket number is 98115. By an odd coincidence, as I see it, a soldier over there has the return portion of the ticket this hat check calls for. Now, I'll give you two boys just two minutes to get together and decide which one owns this hat check."

Oh, yes, they got together. The boy with the hat check paid off. Back through the car there was a mild scramble by other military to retrieve hat checks. In that car I collected three cash fares. When I had finished, it was with a feeling of a job well done.

How did I know about the ticket when the boy had the hat check? My code told me. For the benefit of the occasional traveler, your hat check is your identification, your receipt. Hat checks are issued only for coach passengers. Yet there are times when a passenger in the coaches has a first-class ticket. A conductor has only to look at your hat check to know whether you had a coach ticket, a first-class ticket, a stock contract or a railroad pass or if a cash fare was paid. He also knows whether you are getting off before the end of his run, at the end of his run or going beyond. My own code shows whether you are a man, woman, a child. From a look at the hat checks issued I know whether that check was issued to a white man or a colored man, a soldier or a sailor.

The colors of the hat checks used are many and varied. Conductors change them at will, also their codes. A white hat check today with two punch marks in it may mean one station, tomorrow it may mean any other of thirty stations. Even the way the punch marks are slanted spells a message all its own.

"But why all this?" I have been asked. "Do you think every passenger who boards your train is a potential deadbeat?"

"No!" I say this emphatically. Even the military smart boys were not in that category. To them it was a pastime, a challenge to authority and the pleasure of outwitting said authority. Hat checks are used to protect the passenger, the interests of the company and the conductor. A passenger who stays under his hat check or moves that hat check when he changes seats will never be carried by his destination.

I remember one night when my train became disabled. After a talk with the chief dispatcher it was decided to transfer passengers for Kansas City and beyond to a fast train behind us. I had 143 passengers on that train. Most of the tickets were in my possession. Those tickets had to be given back. They were given back without a single mistake, and solely by the markings on the hat checks in the possession of the passengers.

LET'S go back now to where we left off in the coach, after collecting the three cash fares. I was feeling very well satisfied with myself when I went back to my seat for the usual clerical work. Once more I counted heads, 164 of them. My tickets, honored and collected, added the same. To verify this, I asked the brakeman to count them. He came back to report only 161.

Now, this was a poser. Once more I counted heads. This count tallied with that of my brakeman. Something was screwy somwhere. I began to look at my

hat checks. The stop at Lawrence disturbed my check, but not before I had ascertained that I had three more hat checks than I had passengers.

What was the answer? The three hat checks belonged to three sailor boys. Had they fallen off the train? I doubted it. After we left Lawrence, I took the Pullman pouches and went back to the sleeping car. With the porter in charge and his diagram, we made a systematic inspection of the berths where the occupants were riding on military transportation. In three separate berths we found three sailor boys in addition to the ones supposed to be exclusive occupants. Thus was the mystery of the missing hat checks solved. The sailors with the coach tickets were sent back to the coaches where they belonged.

After this episode, the front door of Pullman was kept locked: Pullman occupants could get out, but others could not get in. But even this did not prevent the incident from being repeated. The boy with the coach ticket would stand in the rear vestibule of the coach, this after a previous understanding with his pal who had a sleeping-car reservation. When the train crew was busy and the Pullman porter engaged, the pal would open the Pullman door, the coach passenger would slip inside, duck into a berth—and there you were.

However, we all make mistakes. In this case, the coach passenger was always guilty. Had he taken the precaution of taking along his hat check, he might have slept in a berth that night instead of a coach seat. A final mention of hat checks and we will let them rest.

This same night saw Ray DeForest, train auditor, waiting at Herington, Kansas. His orders were to check my train, and he was attempting to do so when we left town. If I were any judge, DeForest was not having any luck.

"Why is it that you haven't punched out a single 'TR' on those hat checks?" he demanded. "I've had to awaken a dozen passengers to look at their transportation. The rules require that the 'TR' be punched on every hat check where the passenger still has his transportation."

Well, as I said before, we all make mistakes. I had made one. In fact, I had made a good many as I learned before he had finished his check of the train. DeForest is nothing if not thorough. Nothing gets by him. However, in the matter of the 'TR', I had provided for it in my code. He was inclined to be lenient for the once, but demanded that in the future I conform to the rules and regulations.

The check by DeForest was a welcome one. From him I learned "how" and the "why" of many problems that puzzled me. Tickets are his business. And like all the other men on the Rock Island who hold positions in authority, his attitude is to help and instruct, rather than to damn and down.

All of which will perhaps explain why conductors have to be careful about tickets and the handling of same. Your conductor is on the train to help passengers and look after them, not to abuse them. Right now I am thinking of the two youngsters on the train out of Kansas City one night. They were in tears when I stopped before them for their tickets.

"We've lost them, Mr. Conductor," the oldest said. "We had them when we came through the gate and when the brakeman looked at them. I don't know where we lost them. How much will it cost us to go to Guymon, Oklahoma?"

"We'll talk that over later," I calmed them. "Perhaps you just mislaid them. Take a good look through your purses and your pockets. I think you'll find your tickets, if you look for them. I'll be back later."

I ignored the two children after I had finished the check of the train. The brakeman remembered loading them. Yes, they had tickets for Guymon, Oklahoma. Perhaps they had dropped them in the vestibule or in the aisle of the car. Together we made a search. No such tickets were found.

At Lawrence I went to the phone to call Eddie Dunn, our night chief dispatcher. It was only one of dozens of

times I called him in the days, or rather nights, to come. Would he contact the station master at Kansas City, have him locate the redcap who put the children on the train and also see if any tickets had been found on the station platform.

Eddie did. At Herington was a message. A redcap had found two half-fare tickets for Guymon. Herewith the form and numbers. I could get the tickets on my return. Handle through to Guymon. The tickets had been found on the platform at Kansas City. I turned the message over to the relieving conductor at Pratt. The children went through to Guymon. They were asleep when I got the message at Herington. They were still asleep when I got off at Pratt. Evidently their childish minds had come to the conclusion that if the conductor was not worried about the tickets, they had little reason to be. Smart children!

THE CASE of the smart boy was something else. I found him in the Pullman car one morning. He was still in the berth with his wife when I came through. According to my check, only one occupant should have been in the berth. Only one ticket had been in the pouch and one entry on the car's diagram. I called the porter in charge for an explanation.

"I remember now," said the porter in worried tones. "He got on at Kansas City. She had the ticket. He said he was just helping her on. I thought he got off."

I went to the berth. It was open. The man was sitting on the bed.

"Your ticket, please?" I requested.

"The porter took our tickets last night," he told me. "If you haven't got them that's your hard luck."

"I'm afraid it is your hard luck," I said. "There was only one ticket for this berth. That was for the lady you helped on the train at Kansas City. The fare is $10.09."

"You don't say!" he sneered. "Well, I guess you'll have to put me off the train at the next station. I haven't a nickel for any fare."

Now, the next station was his destination, also that of the woman who was his wife. He was laughing at his cleverness. So were some of the other passengers who had overheard the conversation.

"It's no laughing matter," I assured him coldly. "I must have $10.09. I'd hate to put you off the train in charge of the sheriff."

"Well, I don't see how you're going to get it." He laughed again.

I turned on my heel. The porter followed me as far as the vestibule. He was scared.

"What'll we do, Mr. Jim?" he asked anxiously. "I never dreamed he was in that berth. I don't want to get fired."

"Nobody is going to get fired," I comforted him. "Have they any baggage?"

"Two big grips. One is a mighty fine gladstone."

"Good!" I nodded. "Now, you go back as if nothing had happened. You're only the porter on this train. The conductor's problems are not yours, if this smart boy asks any questions. Gather up their baggage. Make sure it is their baggage. Make them identify it. Then, when this is done, you pretend to be taking it into the vestibule. I'll be there to get it."

The porter did as commanded. I took charge of the baggage and turned it over to the baggageman with a C.O.D. check for $10.09 attached to it. Their baggage was left in care of the station agent at that town. I'll never forget the look on that man's face when we left town and he had tumbled to what had happened. At the next stop I had a message from the station agent. He had collected.

It was in May that a vacancy showed up on the *Californian*. I bid on the vacancy. It meant better hours, a nicer run. On this run I would have an assistant conductor, two good brakemen, four chair-car attendants and two members of the Military Police. Surely there wouldn't be as many headaches on a run like this.

In this I was mistaken. The headaches were still there. Like all trains in wartime, the *Californian* was overloaded at all times. The nine chair cars had a seating capacity of perhaps 600, yet there was

"It's no laughing matter. I'd hate to put you off in charge of the sheriff!"

never less than one thousand passengers on the train. The largest number I ever handled was 1184.

Many a trip out of Kansas City saw the train packed without space for another passenger and an equal number still standing on the platform when the train departed. The same condition prevailed out of Pratt. Many a trip was made when passengers at intermediate stations were left behind on the station platforms, because of a lack of even standing room in the cars.

There were no Pullmans on the *Californian*. There was a coach reserved exclusively for women and children, however, and this coach was the Mecca for women traveling alone. It was also one of the conductor's headaches. This particular coach was the goal of countless thousands of the military who resorted to every sub-

terfuge possible to get into that car. Some had wives in the car, some had sisters.

TO INSURE privacy for the women and save them a lot of annoyance, a member of the crew was stationed inside the door. By actual count one day, 278 men were turned back from that car. Every man claimed to have a wife or sister in the car. At the time, there were exactly fifty women in that car and a few children.

The "bee" boys had no luck on the *Californian*. An M.P. went with the conductor when he checked the train. There was no crowding by in the aisles. On the other hand there were lost coupons, lost tickets and a host of other trying incidents. Stolen tickets were many. This last was not hard to understand after one trip through the dining car. Here were supposedly intelligent persons, yet they would look at you with annoyance in their faces when asked for tickets.

"My ticket is in the coach up ahead where my seat is," they would tell you. "I'll get it for you when I finish my meal."

You were tempted to ask if their pocketbooks and other valuables were also in their coats up ahead. Evidently, many of them had done so, if we were to judge from the numerous reports made. At last, in self defense, we were forced to make a special announcement in the dining cars before we left town that all persons must have their tickets in their possession when the conductor came through.

Attempts at sharp practice were numerous. One day a soldier handed me a coupon off a ticket. This was usual. Coupons did get detached. In that case we merely asked for the rest of the ticket. If he had it, we passed on.

However, this boy did not have it. The coupon was a three-coupon issue with the final destination San Francisco. And in line with all coupons, the "Not Good If Detached" notice was printed on it in large letters.

"Let me see the rest of your ticket," I said.

He grinned. "That's all of it."

"The fare to Pratt is $6.87," I said.

He looked sheepish, but handed me a ten-dollar bill. I made change and cut him a cash fare. At the same time I made a notation of the form and the number of the coupon. This was for a report to all concerned. Evidently some person had lost this coupon from his ticket. If the person who had lost this part of the ticket had paid a cash fare to some conductor, my report would help said person in obtaining a refund.

But no refund was necessary in this case. Back in another coach a woman came up with a ticket from which the Chicago to Santa Rosa coupon was missing.

"Where is the rest of your ticket?" I asked. "The coupon from Chicago to Santa Rosa is missing."

"That ignorant conductor out of Chicago took it," she replied angrily. "And that's my ticket, you can take it or leave it. I paid good money for that ticket and I'm going to ride on it."

I started to make a note of the missing coupon, but the combination of numbers and the form struck me as familiar. I brought out my other memo, the one made after the cash-fare transaction up ahead. You've guessed it. The coupon tendered me by the soldier boy belonged to this ticket.

"You're mistaken about the conductor out of Chicago," I informed the woman politely. "A soldier boy up ahead has your missing coupon." I turned to the M.P. behind me. "Go get that soldier. We'll have an investigation."

The woman turned pale. So did the soldier when we went after the coupon. No, we made no trouble for either of them. The coupon was recovered and attached to the ticket where it belonged. In order that the incident would not be repeated, I left a message for the relieving conductor at Pratt.

Passengers getting left was another source of irritation. I remember the day when a woman got off at a way station in company with some sailors. Until I received the frantic message from her, I

was not aware she was missing. The message was addressed to her husband. He was to get off at the next station and wait for her.

We finally found the husband among the 1100 passengers. Hubby refused point blank to get off. He had a business engagement in Chicago the following morning; it was imperative for him to be there. Then came the final blow. The wife had the tickets, and she also had the family pocketbook. Hubby had not so much as the price of a cup of coffee on him.

So what?

So, the conductor wired the agent at the station where wifie was marooned. The agent was to contact the lady, detach a coupon for Chicago from one of the tickets and wire form, number and so forth to outgoing conductor at Kansas City and mail the detached coupon to the auditor of passenger traffic. This was done. Hubby went through to Chicago.

Not so easy was the colored gentleman out of Kansas City one lovely morning. When I asked for tickets he came up with a claim check that had been issued by the Frisco.

"This is a claim check," I said. "Your ticket, please."

"The conductor has my ticket," he said.

"Where are you going?"

"Mesa, California. My ticket was a round-trip ticket by way of Dallas. I thought it was funny for that conductor to take up all my ticket, but I thought he knew his business."

"What time did you get into Kansas City?"

He told me. At Topeka I filed a message to our passenger agent at Kansas City, giving him details. At Herington there was a message from him. He had got in touch with the Frisco's representative who had contacted the conductor responsible for the mistake. The conductor had the passenger's ticket. Herewith, then the needed information. Our colored gentleman went through to Mesa on that message. A few weeks later I received a letter from the head offices, commending me on the way the matter had been handled.

THE WAR is ended now, but the incidents carry on, each one always presenting some new angle. I am on the Rock Island's *Imperial* one way over the road. The other trip I am on the *Southwest* Express. A nice train, the *Imperial*, Diesel-powered and on fast schedule.

Not so long ago as I write this article, I was in the midst of my checking out of Pratt when an ashen-faced young man came racing down the aisle towards me, while in his wake followed an equally scared porter from the Pullman cars.

"Get a doctor," panted the pale young fellow. "We got to have a doctor. My wife is having a baby. Is there a doctor on the train?"

There was not, to my knowledge. I didn't need the porter's half-whispered, "Chief, we sure have got trouble back there." The train check ended right at that moment.

I had to work fast. We were approaching the only open telegraph office between Pratt and Hutchison. I pulled the signal whistle for a stop at the next station. The engineer obeyed, although he wondered what on earth could have happened. He stopped the train almost in front of the depot.

The agent came out, curious to know the reason. In as few words as possible I told him what I wanted done. Then we departed.

An ambulance was waiting at Hutchison. So was a young doctor. I took up the passengers' claim checks and returned the tickets with a notation they were "stopping over at Hutchison."

Two weeks later three passengers boarded the Pullmans at Hutchison. Only two of them had tickets. On the backs of the two tickets were some hieroglyphics in my own handwriting. I grinned to myself as I punched them.

So—you're a passenger conductor! What does a passenger conductor have to know and do, outside of taking up a few tickets?

Ask me something easy. I've been one for only a short six years.

Electric Lines:

Forgotten Trolleys of Cambria County

MOST electric fans are familiar with the Johnstown (Pa.) Traction Company, the smallest streetcar company in the United States to purchase and operate streamlined PCC cars. But few remember some of the trolley roads operated long ago in Cambria County of Western Pennsylvania, where Johnstown, too, is situated. This busy industrial and mining territory gave rise to several ventures in the electric railway field, including one storage-battery line operated by a steam road. And although the Southern Cambria Railway—featured last month—was the largest and speediest of all electrics in the vicinity, there also were four other companies in addition to the extensive Johnstown Traction system and its Windber interurban route.

The earliest street railway in the area was opened by the Johnstown Passenger Railway, having been chartered May 8, 1882 as a horsecar line. This is the same company which was taken over in 1910 by the Johnstown Traction Company, under which name it operates today. Nearly a quarter-century after this began operation another electric was proposed up in the northern part of Cambria County, the Northern Cambria Street Railway chartered in 1901 to build a line from Patton to Barnsboro, with a spur line south to Carrolltown. Work on its building actually started on May 16, 1905, and it was another two years before the line began operating.

The Northern Cambria was a short, slow line, as trolley roads go. Along its thirteen miles of trackage, only seven passenger cars were used. The Patton-Barnsboro run employed four passenger cars with baggage compartments. These last were built by St. Louis Car Company

One of Johnstown's few bus casualties was the Dale line. Photo *left* shows the reason: narrow streets for its right-of-way

and were numbered 302, 304, 306 and 308. On the Carrolltown branch line, three single-truckers, Numbers 202, 204 and 206, were used; a single-trucked sweeper, later bought by the TC and numbered S4, brought up the remainder of the roster. All cars were painted a dull green.

While controlled in part by the powers behind the Southern Cambria Railway, the Northern Cambria line found it difficult to earn money in the rural locality through which it ran. In March, 1918, it was sold at foreclosure; the new owners continued operation for a time, although earnings failed to increase, and at this rate the line continued in the red. In 1926, the road abandoned its service, after a hapless existence of twenty years.

The Southern Cambria Line was the next built in the county. Originally planned to connect with the Northern Cambria at Carrolltown, it never came closer than Ebensburg. Between 1910 and 1928, it provided fast interurban service out of Johnstown to South Fork and Ebensburg. But at that time a series of unfortunate and costly accidents brought it to an untimely end.

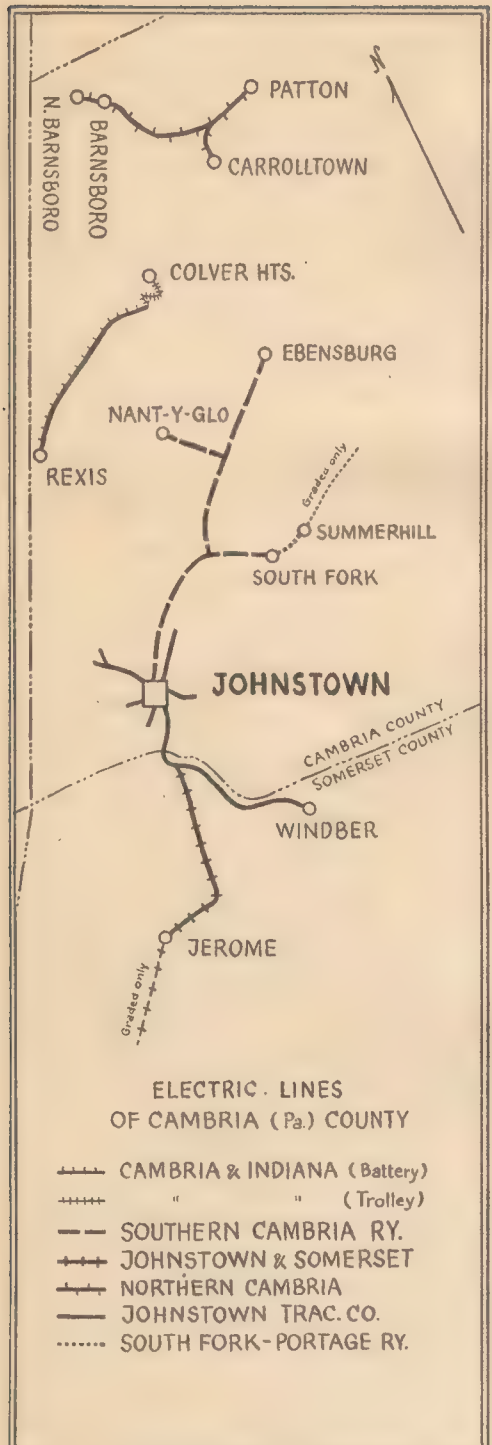
The Southern Cambria electric never contemplated going beyond South Fork with its track east from Johnstown. Yet there was another road that planned on building east from South Fork, through Portage and Gallitzin into Altoona, Pa. This was the South Fork-Portage Railway which started construction east from South Fork along a single track in 1913. Two heavy steel, center-door interurbans were ordered from Niles Car Company for the start of what was hoped to be an extensive interurban, with trackage rights over the SCR into Johnstown.

ACTUALLY what resulted was more of a joke than an interurban line to the riders, once it commenced operation. Instead of going to Altoona or Gallitzin, or even Portage, the line traveled a couple of miles out of South Fork to Summerhill, and a mile or so beyond, stopping just a few feet east of the old Portage Railroad cut. It was graded to Portage, and a bridge was built at Wilmore, but there the money ran out. So a three-mile single track was the net result of the originally impressive plan.

The two heavy interurbans arrived as ordered from Niles Company. Painted red, they closely resembled similar equipment used on the Kansas City, Clay County & St. Joe, and on the Trenton-Princeton interurban in New Jersey. But on a single-tracked shortline with no turnouts, it's not only difficult to operate two cars—it's impossible. For there's no way to get one car past the other without installing helicopter blades.

So we find Number 1 standing at the east end of the track where it stayed until

Streamlined Number 401 and 416 meet at the Ferndale Loop on Johnstown Traction right-of-way. The JTC is the smallest streetcar line in U. S. to own and operate PCC cars



Cambria's seven surface lines were slow to build, but quick to abandon, trackage. Today only the Johnstown Traction provides electric service

abandonment, never having been operated. Car 2 made the short run back and forth, day after day, on hourly schedule. The ponderous interurban, with its whistle, arc headlight and impressive pilot was little short of ridiculous on this three-mile *interurban* pike. Due to the center doors, a two-man crew was necessary; so with expected haste, the road went into receivership, and was reorganized as the Penn Central Railway in 1918.

Like the Southern Cambria Railway, the Penn Central had its troubles with the hilly country. Coming into South Fork, the right-of-way passed down a heavy grade, and on several occasions cars glided down the slope into town like toboggans, knocking down power poles and throwing South Fork into darkness. On one occasion Number 2 ran off the tracks, clipped off the front of a store and a barber shop, then swung back into the street and rolled to a stop beside the Pennsy tracks. A Pennsylvania derrick lifted the car on to the railroad's track and carted it up to the old Portage cut where it set it back on its own runway again.

Finally, the town put a large bumping block across the rails at the borough line, stopping the car there. This spelled doom for the Penn Central. In a matter of weeks, the line had ceased operation.

The Cambria & Indiana installed passenger service along its steam road in 1912, for the benefit of miners working in pits along the eastern end of its trackage. For the run, a heavy battery-operated car was bought from Brill Company. Seating forty passengers, the car had an interurban-type body and was equipped for overhead trolley pole operation along a heavy grade two and one-half miles outside Colver, Pa. The entire run from Colver to Vintondale covered fourteen miles, until later extended into Nant-Y-Glo.

Fare on the C&I battery car was three cents a mile. The single car, Number 14, handled all service until a mate was bought for it in 1914. Trolley poles were carried off center, as were the overhead wires near Colver.

Johnstown & Somerset Number 10 ***left*** and Northern Cambria 204 ***below*** bear no relation to their respective traffic loads. Car 10 and its sister, 11, were bought on sheer optimism. Projectors thought the J&S would reach Somerset, Pa.; when it stopped at Jerome, they were bankrupt within 11 years of its first run. The Northern Cambria, on the other hand, eked out 20 years of service. Number 204 was one of three single-truckers carrying passengers over the Carrolltown branch

Yet, the event that marked *finis* on the service of most electric railways in Cambria County eventually caught up with the Cambria & Indiana single track: one of the battery cars met a steam train head-on. Several passengers were injured and the trolley itself demolished. This accident occurred on May 31, 1925; and as a result of it, the company decided to abandon passenger service.

A NEW outfit came into being during the first World War. Plans were made for the construction of an interurban south to Johnstown to Somerset, Pa., in the county of the same name. The road was to use the Windber interurban of the Johnstown Traction Company as far as Kelso Junction, and from there on to run on its own rails. Two cars were purchased—steel Brill jobs of modern appearance, numbered 10 and 11. They made their first run to Jerome, the point where the line eventually terminated, on September 30, 1922. Beyond Jerome, the roadbed was graded as far as Boswell, yet cars were never scheduled or run past Jerome.

Service on the J&S was on a two-hour headway. Power was bought from the Johnstown Traction Company, which also handled all heavy repairs for the J&S. A small barn was located along the right-of-way at Holsopple. Yet in spite of efficient organization, the infrequent service and light patronage along this rural line doomed it once the depression came. By 1933 all operation had ceased. Car 11 went to the scrap heap, and Number 10 was taken over by JTC. This Brill-built

Niles-built Number 2 at the South Fork terminal. No other trolley ever rode the Penn Central's 3 miles of double iron

car is still in use, as Number 304.

Today, with the exception of the Johnstown Traction Company, there is little trace of any of the Cambria County electrics. Yet the JTC schedules runs over nearly its entire original trackage. The Windber interurban was a casualty of the 1936 flood; the city line to Dale was replaced by a bus in 1939 because of extremely narrow streets over which it ran. But except for these abandonments, the Johnstown Traction rolls on.

For a short period the Oakhurst shuttle line was served by a bus; after rebuilding of the track, however, the shuttle was again electrified. As a compact, busy system, the JTC has proven the value of the modern streetcar in cities under 100,000 population, where track and equipment are conscientiously maintained. The newly-acquired PCC streamliners—seventeen in number—form a reliable base for operations on the thirty-five miles of rail. And there is no question but that Johnstown, Pa. is being served by the best modern transportation has to offer.

Carbarn Comments

Steve Maguire

BEST NEWS of the year comes to us from Detroit, where the newly-elected administration has doomed the all-bus plan of ex-Mayor Jeffries. Our thanks to M. R. Schwartz, 1015 23rd St., Wyandotte, Mich., who sent us the front-page spread from the *Detroit Times*. A sight for sore eyes, that newspaper surely is, with two-inch headlines reading, "DSR Goes Back to Rails," and in red-faced type, "All-Bus Program Scrapped."

The new president of the Detroit Street Railway Transit Commission is Samuel M. Dean, chief engineer for the Detroit Edison Company and long a proponent of electric transportation. Here's the new policy for Detroit: (1) no more scrapping of streetcar lines except in a certain few cases where other types of transportation are better; (2) develop electric rapid transit. This does not mean old-fashioned streetcars. It means either fast streetcars or trains, operated on exclusive right-of-ways where cars can run full-speed without interference from motor traffic. The third objective of this program is long-range planning to tie-in electric transportation with express highways.

It is fortunate for the City of Detroit, that even at this late date a halt has been called to the 12-year plan of converting all transportation to motor buses. In Detroit, as in many large cities of the United States, the traffic problem has increased to such extent that the buses now are outmoded. Their successors must be in the form of rapid-transit and fast electric transportation.

* * *

SEVERAL lines appearing in our 1948 electric railway listings have gone from the boards. Arizona ended its last electric line on February 1st, at which time the Phoenix St. Ry. was completely motorized.

Arkansas, too, is now without electrics.

Stanley D. Crews, Lawrenceburg Hotel, Lawrenceburg, Tenn., informs us that the last cars of the Capital Transportation Company ran on December 26th. The Fair Park-E. 9th and S. Highland-E. 14th lines were the last to operate in Little Rock, Ark.

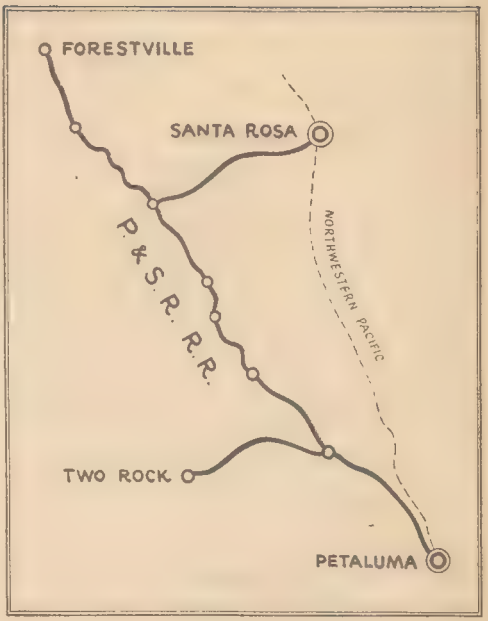
Evansville & Ohio Valley Railway at Rockport, Ind., has been abandoned and is dismantled. The thirteen miles of this road were operated as freight-only after passenger service was abandoned in 1938.

Iowa Electric Light & Power's one-mile freight track at Boone, Ia. has been discarded. It was used for carrying ashes from the company electric station until other means of disposal were found. Then the route was scrapped.

Also abandoned, although appearing on the list, are the Conestoga Transportation Company at Lancaster, Pa.; City Lines of West Virginia at Clarksburg, West Virginia, and the Ft. William Municipal Railway in Canada.

* * *

SINCE January 24, 1947 when motor 1008 brought a carload of horses to Liberty, Calif., Petaluma & Santa Rosa has not run an electric engine. According to to Stanley Borden, Box 324, Fortuna, Calif., the freight pike's overhead electric



Thirty-four years' electric operation on the Petaluma & Santa Rosa ended in January, 1947, when Motor 1008 carried its last carload of freight to Liberty, Calif. Map *above* shows the area now under Diesel operation; broken line indicates the parent road

wires were taken down during the year and service is by Diesel engines only. Mr. Borden has submitted a brief history which follows.

The Petaluma & Santa Rosa Railway was incorporated on June 20, 1903, as a consolidation of the Petaluma Street Railroad, the Central Street Railway, the Union Street Railway of Santa Rosa and the Santa Rosa Railroad. Work on the building of this electric commenced at Petaluma on April 5, 1904. In October the first passenger car was operated to Sebastopol; on December 1st, regular service was opened as far as the California Northwestern Railway in Santa Rosa. But the CNW refused to let the P&SR cross its tracks, so the company laid rails from the other side to downtown Santa Rosa. Passengers had to walk across the CNW tracks from one car to another, but they completed their trip.

After three month's controvery, the crossing was effected on March 1st. By this time, there were twenty-four miles of track in use and a steam boat operated between Petaluma and San Francisco, carrying passengers and cargo. On July 15, 1905, a line between Sebastopol and Forestville, seven miles off, was opened. The five-mile branch between Liberty and Two Rock was opened on July 28, 1913. Then on October 29, 1918, the P&SR Railway was brought to a foreclosure sale by the Petaluma & Santa Rosa Railroad.

It was not long, however, before paved roads and autos began to cut into the passenger business, so on September 30, 1925, passenger service to Two Rock was discontinued. In 1932 the Northwestern Pacific Railroad purchased the P&SR; and by July 1st, all passenger and express service had been discontinued. Passenger service on the steamers was continued until 1935.

At present, the freight business is good. Only one mile of track has been abandoned, and that in downtown Santa Rosa. Besides the cargoes handled by the boat to San Francisco, cars are interchanged with the Northwestern Pacific at Petaluma and Santa Rosa.

The steam boats built to navigate the Petaluma Creek to San Francisco Bay were all stern paddle-wheel river boats. The first one was bought in 1904 and was named the *Gold*. In 1912 the *Resolute* was bought; but it burned in 1913 and the *Petaluma* was built to replace it.

The *Gold* went on fire in 1920 and its run was taken over by a new steamer also named the *Gold*. In 1940 this second *Gold* was scrapped. However, the *Petaluma* continued operating between Petaluma and San Francisco.

Passenger Equipment
(Odd numbers only)

Number	Type	Builder and Date
51-57	pass. motor	American Car Co., 1904
59-67	pass. cars	Holman Car Co., 1 1904
69-73	pass. trailer	P&SR., 1921
01	express motor	P&SR., 1921

Note: The motors were later removed from No. 01, which was then used as a trailer; all passenger equipment was scrapped between 1932 and 1942.

Number	Weight	Horsepower	Builder and Date
100†	100,000	1000	
502	77,000	300	Amer. Car Co., 1917*
504	91,000	600	Ocean Shore; bought 1921
506	93,000	600	P&SR., 1923
1004	51,000	192	P&SR., 1927
1008	51,000	192	P&SR., 1928
1010	51,000	192	P&SR., 1930
1004B	51,000	192	P&SR., 1930
1008B	51,000	192	P&SR., 1930

Note:- Motors 1004B and 1008B are booster units for 1004 and 1008, have no cabs, controllers, or pantographs, cannot be operated alone; when coupled to 1004 and 1008, jumper wires are used to supply electricity
†Leased from Southern Pacific and now scrapped
**Bought from Kansas City-Kays Valley in 1920*

* * *

SNOW and ice during the past winter caused tieups on many transportation lines, both rail and bus; but in Denver, Colo.—where the local tramway outfit is considering a change from rail to buses—it caused great confusion. The question now is, how desirable would it be to switch over from rail lines. And local newspapers are doing their wondering out loud!

Due to its height, over 5000 feet above

sea level, Denver frequently experiences serious storms in winter. Both last winter and for recent months, the streetcars have carried on through the heavy weather while the buses became stalled on the city roadways. George Brown, 640 S. Dale Ct., Denver, sends word that the newspapers have commented on the situation. "While buses slithered and stalled, Denver's stout old streetcars plowed right through," wrote the *Denver Post*. "No Denverite will forget that in last year's big snow, it was the streetcars alone that kept the city moving. That was a lesson in city transportation for many winters to come."

In the East, however, one interurban line was tied up for weeks, from an unusually severe ice storm. The Lehigh Valley Transit route between Norristown and Allentown was torn apart by a New Year's ice storm that leveled wires and wreaked havoc with the essential signal system. Rev. George Wickersham of All Saint's Church, Norristown, Pa., tells us that the local paper, the Norristown *Times Herald*, editorially stated that it would be well for the line to quit running interurbans, if they couldn't do better than the local Norristown buses. These motor coaches operated reasonably well in the city.

On behalf of the LVT route, however, we must point out that it's a lot easier to run buses locally where plows are keeping city streets open, than in distant stretches of open country where heavy drifts may not be plowed through for days. Then, too, the LVT has been in the doghouse at Norristown ever since its two serious head-on collisions during 1944.

In Atlantic City where new Twin Coach buses were substituted with great ceremony for the Shore Fast Line interurbans on January 18th, one of the new motor units had hardly gone into service when it collided with a car and ended up against a tree. In this case there was an inch or so of snow on the ground; but the snow hadn't affected the interurbans while they were running.

Just a month before the end of its electrics, the New Jersey Public Service was testing its new buses for their jobs on

Photo by George Reitze, Jr., 44 Belmont Ave., Jersey City, N. J.

Snow-bucking trolleys in Jersey cut tracks through the blizzard of '47 by driving forward into the drifts and then reversing, so trackmen could shovel away the ice. Train speed, however, was nothing to brag about: six blocks in twelve hours

There's little exultation in the front-end slogan, "I made it!" and no huzzahs from the Atlantic City juice fans, as Number 105 goes the last mile on January 18th last. As usual, it was a prelude to buses

the Central Line in East Orange, when one newcomer —not yet in service—brought similar embarrassment to the operators. It ran smack into a tree along the route. Yet regardless of the merits of rival forms of transportation, there can be no question of one thing: snow and ice are a problem that must be faced by all surface lines.

* * *

LAST passenger run on the Sacramento Northern, operated by a Birney at Chico, Calif., was changed over to buses on December 15, 1947. These were the last Birney cars to run on the West Coast; Ft. Collins, Colo., was second in western location.

Birney cars made their exit from the Chicago area, too, when the North Shore line supplanted its Milwaukee four-wheelers with newer equipment used formerly on its Waukegan, Ill. local lines. By actual count, there are fewer than ten railways in the U. S. now operating Birney cars, and in several cases even these do not run them regularly. Looks like the days of the four-wheeled model, designed by Charles O. Birney in 1916, are numbered.

* * *

TWO Iowa electric companies are scheduled to pull a fadeout. The Sioux City Transit, operating eleven lines in that city, plans to be replaced by buses during

Fort William Electric's carbarn in Ontario, Canada. The recent abandonment of the line puts both equipment and property on the auction block

1948. And the Southern Iowa Railway, a freight route between Centerville and Albia, Ia., has petitioned the ICC for permission to abandon its twenty-two miles of trackage.

Steam to the rescue! When floods rose above Illinois Terminal's electric tracks, a steam engine boosted a 2-car electric train along its own parallelling roadway. *Below:* Jamestown interchange of New York Central and New York's last interurban, the JW&N. Electrics like Car 301 were replaced by buses

* * *

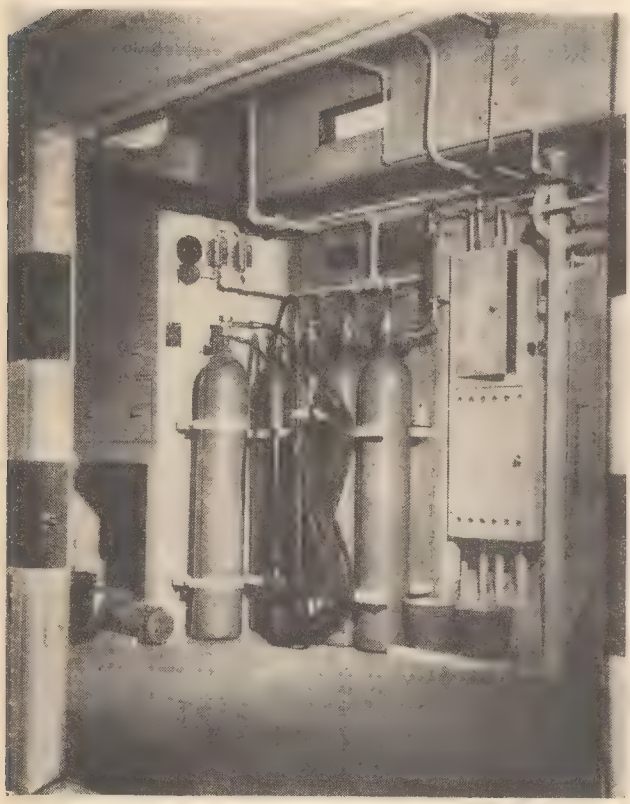
HISTORY of the Massachusetts' Northeastern Street Railway has just been published by the Connecticut Chapter of NRHS. With sixteen pages of descriptive material, photos, maps, and so forth, the booklet sells for fifty cents. Copies may be obtained from Roger Borrup, Warehouse Point, Conn.

Freedom Train Is Landmark In Railroading Security

EQUIPPED with special signaling lights and traveling under a Blue Flag, *Freedom Train* moves from point to point on its 33,000-mile route, fully protected against almost every form of danger except an air raid or total immersion in water—contingencies that at present seem fairly remote. The basic precautionary measures involved the welding of some twenty tons of new steel into the exhibit cars furnished by the Pennsylvania Railroad and into the remaining portions of the train. The steel doors in the exhibit cars contain safety glass windows covered with steel bars and fitted with protective tape connected to a burglar alarm. Special locks keep the doors closed after exhibit hours, and twenty-four Marines are on duty to protect the famous documents at all times.

Between three and four thousand square feet of a new type of lucite plastic enclose the exhibits which, in turn, are anchored by bronze bolts inside the steel cases. The plastic is shatter-proof, water and fire-resistant, and strong enough to withstand a 100-pound ball traveling at a speed of fifty miles per hour.

Freedom Train is also carefully guarded against fire. All the paint is fire resistant, the carpeting is chemically treated to resist flame and the exhibit coaches and the equipment car (Santa Fe-donated) are fully protected by an automatic carbon dioxide fire extinguishing system. Discharged as a white cloud from ten multijet nozzles located behind display cases, the carbon dioxide expands to 450 times its stored volume, lowers the air's normal oxygen content from twenty-one percent to around fifteen percent, thus starving the flames out. The three dimensional nature of the gas makes penetration complete while its harmless effect on the documents make carbon dioxide a natural extinguishing agent for the *Freedom Train*.



No other train in our history has ever had such complete protection from damage of all kinds. It represents the cooperative efforts of fifty-two railroads, the United States Department of Justice and the American Heritage Foundation, and of many plain rails, at least 5000 of whom will have contributed their services by the end of the *Train's* tour.

Photos from Walter Kidde & Co., Inc.

Watch dog of the fire-protection system for ***Freedom Train*** are five fire detectors located in all three exhibit cars. If fire breaks out, the detectors simultaneously release gas from the tanks into the piping system and set off an alarm gong to warn the occupants

Pressure switches shut off ventilating fans to prevent dissipation of carbon dioxide, which discharges through multijet nozzles. Supplementing them is a 100-pound cylinder with hose-reel attachment. ***Above:*** D.C. fire deputy and staff examining a cylinder

Rising temperature is what operates the fire detector shown in ceiling ***at far right.*** A shut-off valve inside the piping holds gas until the guard on duty releases this valve. Multijet nozzle, one of them behind display cases in all cars, is located to the side of the fire detector

Hi, Miss Frisco!

By T. H. QUAST

Highballing for passenger comfort! Since November, 1943, Jerry Ketchum's been the Frisco troubleshooter down in Tulsa, Okla.

IF YOU'RE ever on a train passing through Tulsa, Okla., and should see at the Union Depot there a pert, friendly young woman in a Frisco uniform, with hair the color of burnished copper peeking out from under her wide-billed cap with the big red Frisco sign on it; if you find her inspecting the air conditioning or turning a crying child's tears into laughter by her quick wit or more often a bite of candy—Brother, you're looking at Jerry Ketchum. Jerry is the Frisco's way of saying, "Mr. and Mrs. Passenger, we want your rides on the Frisco to be the nicest rides of your life. If there's anything we can do or say to make you comfortable or unworried or happy, just let us know."

In other words, Jerry is the Frisco's depot passenger representative, the first woman to hold such a job. Her connection with the St. Louis & San Francisco began back in 1942 when she went to work as secretary to Mr. E. C. Baker, then general passenger agent, now passenger traffic manager in St. Louis. After one year she was transferred to Tulsa to work as reservation clerk in the city ticket office and later as ticket clerk there. On November 22, 1943, she started on her present job, a position which had just been created.

There were no precedents to guide her. "Get out there, Jerry," said her boss, "and be our troubleshooter. Sell the Frisco to the riding public. You can make as much or as little of your job as you want to. It's a brand new setup and it's up to you to make it little or big."

Well, to a gal with ideas and initiative that was some order. In no time Jerry was making up outgoing passenger trains and acting as walking aid and information bureau . . . finding seats for old and sick passengers, arranging accommodations for service men and women, finding lost luggage, solving the riddle of timetables, quieting restless babies, seeing that seats and windows were clean. If that sounds like a doleful job, you just haven't seen Jerry Ketchum working at it. You'd swear if you did that she's having the time of her life.

"It's the whole world going by," she says, "and I love every minute of it!"

They're still laughing around the depot about the lost-baby case in which Jerry played a surprising part. A young woman had boarded the train, found a seat and prepared to settle, when she jumped to her feet and ran screaming from the coach. "My child! My child!"

Jerry had the train held while she vaulted the stairs to the waiting room, closely followed by Jerry. There the young matron snatched up her three-month-old baby from the seat where she had absent-mindedly left it when she heard her train called. Just as she started to re-board the train, she turned to Jerry. "Why didn't you notice that I didn't have my baby?" she admonished. "You knew I had a baby! You saw me with it!"

Once when fifteen war nurses passed through on their way to the Philippine Islands, Jerry took down all their Christmas orders for their boy friends. She acted as treasurer of their money, went shopping and sent presents to boys in foxholes and aboard ships across the globe. Maybe you think she didn't get a bunch of thank-you letters from that crowd!

"I almost got a kiss one time from a GI who thought I was his Red Cross girl friend," she laughs. "Just then I turned around—and missed."

There was one young man she couldn't help much. He was frantically imploring the conductor to help him find out if his girl friend had come in on a certain train. "Did you bring her?" he was asking over and over again as Jerry walked up. "Did you bring her? She's a little blonde girl with blue eyes." Just then he looked down at Jerry. But Jerry's eyes are the color of leaves in winter, so she didn't pass.

DURING the Christmas rush of 1945, when it was almost impossible to secure a seat on a train, bus or plane—when even standing room was at a premium, and only persons holding tickets to the most distant destinations were lucky enough to be assured a seat eventually—one sweet young thing tearfully appealed to Jerry that she "just had to get on a train." She had never missed spending Christmas with her mother who lived in Boston. Three trains later, when Jerry found standing room for her, the girl almost hugged her.

One of the most appealing passengers Jerry ever assisted was Mrs. Eddie Rupe, an Irish girl who had met a young soldier from Holdenville, Okla., in London and married him. She had come over with their twin baby daughters, Opal and Kathleen, to live in America. Jerry helped her off the train with her double armload, whisked her upstairs to the waiting room and hovered round, ready for any requests.

"Couldn't I get you anything?" she asked hopefully.

"Oh, I have me food," smiled the visitor, "but it's water I'm needing to mix it with."

Jerry ran to a nearby restaurant for a glass of water. When she returned, she was trailed by a whole gang of engineers and brakemen who had heard about the babies and were eager to see them. Later Jerry heard that one of the babies had died. Her eyes grew misty.

Letters come to Jerry from New York to California, from big executives, show people, sailors, truck drivers, housewives, sad people, merry people, the sick and their relatives expressing gratitude for her graciousness and help. A typical one is from Jack H. Conway, national vice president of the American War Dads, who wrote, "Dear Miss Ketchum. Recently I had the pleasure of reading a very fine article in one of the local newspapers relative to the outstanding assistance you rendered during the war in your capacity at Union Station. I want you to know that we deeply appreciate the many fine things which you did for our sons and daughters who were in the service and who passed your way."

Jerry's note in return was characteristic of her. "Dear Mr. Conway," she replied. "I'm so grateful to you for your

nice letter! Such comment only makes us want to do an ever better job. Sort of a 'shot-in-the-arm' letter, we call it. I do want you to know that any service that I may have rendered to those who served so unselfishly only served to enrich my own life. . . .truly."

Miss Frisco consistently declines tips. "Accepting tips would take my work out of the personal service category and make it too cold and commercial. It wouldn't be any fun that way," is her attitude. But that does not stop people from trying to express their appreciation. As a consequence, there is seldom a time when her desk doesn't hold a pair of new nylons, a new handkerchief or a pair of tickets to a show; or when there isn't a bag of fresh doughnuts on her radiator keeping hot.

Many truck drivers who ride the Frisco know that she's often too busy to stop for lunch. So they drop by on their way to the train with bags of cheese, bologna rolls, pickles, crackers, and so forth. If she finds a crying youngster in the waiting room, Jerry can always rely on her desk drawer to produce a candy bar to distract him.

AROUND Tulsa they refer to the Frisco as Jerry Ketchum's railroad. A Tulsa newspaper man one time even called her "The Frisco's Number 1 asset," and reported that on one Saturday afternoon as he walked down the block with her, she was greeted at least one hundred times, in every way from "Miss Frisco" to "Hi, Railroad!" and "Hello, Miss Cotton Pickin'."

Formerly state president of Epsilon Sigma Alpha, the international business and professional women's sorority, Jerry has just been appointed national director of public relations for their organization. When they held their state convention at Enid, Okla., in February, Jerry took a Frisco carload of members up from Tulsa. But she would certainly have been less eager to get there, if she had known what was in store for her.

The minute she stepped off the train, waiting members and delegates placed the bridle of a gaily-decorated donkey into her hands and had her lead him down the street as he bore another state officer to convention headquarters. Just behind, other officials were being transported in an ambulance. After two or three blocks, however, Jerry deserted the nag on the grounds that he was too slow and "besides that he was threatening to drool any minute on my clean oyster white coat." A crestfallen Miss Frisco found refuge in the ambulance.

The most difficult situations Jerry encounters, she says, are those growing out of Pullman passengers' mixing up shoes and walking off in somebody else's. But she never admits "who done it" for fear of embarrassing the absent-minded or careless individuals.

"Did I ever tell you about most embarrassing moment?" she queries. "It happened at Bryan, Okla. I was on a little three-car train which pulled up on a siding to let a streamliner go by. A member of the train crew and I got off and stood between the tracks of a switch line to watch the beauty of the rails whiz past. We were so lost in our gawking that when we came to we found our own train had gone off and left us—and it was raining cats and dogs!"

Jerry insists that the nicest compliment ever paid her came about in this way. She came upon the station platform one day during the war just as a GI, in an almost complete body cast, was being hoisted into the train through a window. Jerry saw that they were having quite a bit of trouble and that a crowd of staring people had gathered.

"I thought it was so thoughtless of people to add to the boy's embarrassment," she recalls. "His face was so red."

Quick as a flash, she transferred the crowd's attention to something farther down the platform and the loading was speedily completed. That was more than two years ago. Not long ago a road official passing through Springfield, Mo., happened to be talking to a veteran when Jerry's name came up. The man told this

story, identifying himself as the returning soldier.

"I never felt that I was at home again until I met Jerry," he said. "I was mad at everybody and everything, but her kindness gave me a different slant. For the first time I felt that what I had gone through with was worthwhile."

Jerry is spontaneous, unaffected and sincere. She has helped her millionth passenger and has loved every "cotton pickin' one of them," to quote her. One suspects, though, she is a very serious person: she devotes full waking time to taking the edge off life for other people.

Coming upon a coach full of dour-faced passengers one day, she stopped. "What in the world's the matter with everybody today? Have you forgotten how to smile?" with that Jerry did three or four steps of a silly tap dance in the aisle. The crowd came to life. "More!" one fellow yelled. "More!"

"No, that's all," she answered, grinning, and faded out of the car.

At first the operating department resented a woman in their ranks and predicted all sorts of dire consequences. "It'll never work," they said; but how long can you resent a cute little trick who holds the lantern while you fix the engine, does her own job well, pretends never to hear the %x?@&#(*/$*) exploded when you lose your temper, laughs with you and knows when to stand by and be a good listener? No wonder they swear by her.

"Our respect and admiration for each other is mutual," Jerry says.

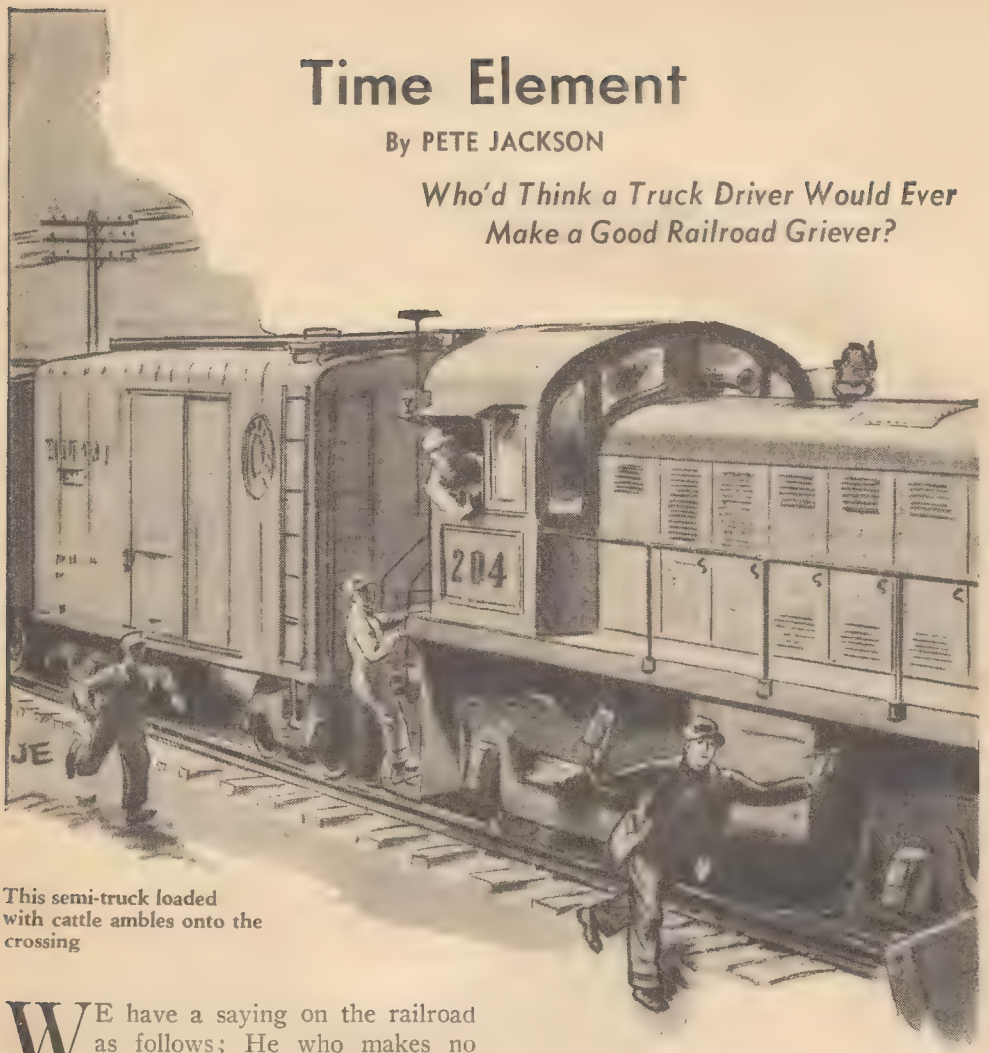
Looking hastily at her wrist watch, she comes to order. "Well, gotta count the passengers on that cotton pickin' train." With a wave of her hand, Miss Frisco is across the waiting room and on her way to the platform. She'll be making some more friends for the St. Louis & San Francisco.

Clearing North Conway yards, Boston & Maine's afternoon passenger starts its journey down the snow-heaped New Hampshire valley to Dover, connection for Boston

Time Element

By PETE JACKSON

Who'd Think a Truck Driver Would Ever Make a Good Railroad Griever?



This semi-truck loaded with cattle ambles onto the crossing

WE have a saying on the railroad as follows: He who makes no mistakes does nothing; he who makes too many loses his job; if nobody made mistakes there wouldn't be erasers on lead pencils.

I ain't been given a lead pencil without an eraser by my company, even during the late war when rubber was scarce. Outside of the time I wore a G.I. uniform, I been switching boxcars. At present, I'm that tall, skinny, blue-eyed, brown-haired engine foreman on the 3:59 p. m. to 11:59 p. m. job on a western pike that, owing to things I divulge, I ain't telling the name of.

This day we're heading toward the yards, coupled to three boxcars. Now we got a rule that says any time cars are handled across town, all the air must be coupled on same. But the "Jimmy" on our Diesel-electric switcher is powerful enough to stop us on a dime. So I just tell my two helpers, "To hell with the air."

We come to this 101 Highway and reduce speed to the required five miles per hour. My hogger blows his horn and has his bell clanging. I note both wig-wags are working. I also note a semi-truck ambling toward the crossing. This happens to be a stock truck, loaded with cattle.

Now in any man's language wig-wags swinging across a railroad track means a train is coming. This truck driver slows, so we figure he's gonna stop. Instead, when he sees we've slowed he gooses his

semi and tries to beat us to the punch. He darn near makes it, but not quite. There's a sharp, splintering crash as our motor catches the extreme hind corner of the truck. The truck goes down on that corner like a fighter knocked to one knee. The back gate busts open under several tons of scared cattle and next thing I know eleven of 'em are loose.

I'm no authority on cattle, but I can tell the difference between a cow and a bull, and a quick glance shows me that a stocky, fat bull has taken charge of the situation and is heading down our railroad followed by all ten of his lady friends.

I pull out my pencil and a pad of switch lists, figuring on writing down all data connected with this accident so I'll have it when I make out my report in the yard office. Then I head toward the cab of the truck from which a big, round-faced young fellow is climbing. The big ape ignores me, even when I yell, "Hey!" at him. He marches past our engine, halts at the coupling between her and the three boxcars and gives a very sharp and penetrating look. With me following him he continues all the way to the end of the rear car.

I've seen this truck driver eating at the 5-Spot, where me and my crew usually

take our bean hour. In fact, he's been getting very friendly with Jo Ann, who slings hash at the 5-Spot and also wears my diamond ring on the third finger of her left hand.

After this truck skinner finishes his inspection he turns to face me. "I understand," he says ominously, "that rules say trains operatin' over public crossin's should have air coupled in all cars."

"We got a broken train line on our engine," I alibi right back at him.

His grin is nasty. "Oh, no, you ain't," he argues. "I already looked."

"Also, we been havin' trouble with our air compressor," I add.

"Listen, hotshot," he says, "your railroad company has just bought ten pedigreed milk cows plus one prize bull."

I ignore the "hotshot" crack. "Let's get all the dope together," I tell him. "I hope you got a driver's license," I say real sarcastic.

He digs out a billfold and hands me his license. I note that his name is Hank J. Speers. While I write down the dope I'm thinking this Hank Speers knows more about the inside stuff of railroading than a common truck driver should. At the same time I'm framing an alibi as to why we're moving across a highway without air on our train.

"Okay, Pete," he tells me when I finish. "The next move will be up to your claim adjuster." Since he knows my name—it's Pete Jackson— I assume Jo Ann has told it to him.

Meantime the prize bull and his harem are still plodding down our main line, heading for a truck farm full of good cow feed.

My crew has moved our engine off the crossing so traffic can flow. Hank Speers looks over his truck, climbs in the cab and runs it off the track. That's the last we see of him.

When we get done with our work, I make out an accident report in which I note that we have no air on the cars owing to the fact we are making a switching movement across 101 Highway. This seems an excellent alibi in any rail's language and should take the wind out of the sails of Hank Speers.

The claim adjuster shows up on the same day a most disquieting bulletin appears in our book. The agent takes a long-winded statement from me. He stresses the point we are engaged in a switching movement over 101 Highway. He also emphasizes the fact that the engine bell is ringing, the whistle properly sounded, the wig-wags working and that said stock truck deliberately drives square in front of us.

I silently affix my signature and turn back to studying this new bulletin.

It says as follows: "Yard crews will be held strictly to their allotted twenty-minute meal period in the future. It has come to my attention that some crews have been using from fifty minutes to well over an hour. This practice will be discontinued at once. Mr. Marvin Mangle, Assistant Terminal Trainmaster."

I turn to the Beak, who is our yardmaster, and Jo Ann's uncle. The Beak's right name is Henry Morse, but all of us use the moniker that best suits him, both in regard to his nose and his big bay window. "Just who in hell is Marvin Mangle?" I yelp.

"He was a yard clerk," the Beak informs me. "But he got himself promoted because he kinda stool pigeons. Our regular trainmaster is off on a leave of absence."

"I ain't never heard of Marvin Mangle," I remark.

"You will. Seems he hides in weed patches to check on yard crews. He's a regular book-of-rules official," says the Beak.

To me, this new bulletin is a revolting development. I am accustomed to use anywhere from forty-five minutes to an hour and a half for our bean hour. Jo Ann is so gorgeous to look at that a fellow can spend hours just watching the way she dimples and pouts and frowns. I mentally call this Marvin Mangle some choice names that don't appear in nice books and resolve to cut down on our bean hour, much as such a decision hurts me.

WHEN the canning season starts, business picks up with a bang. In fact it grows so heavy the company has to assign a couple more switch engines, which caused me to lose my regular field man, who is able to hold a foreman's job. The prospect of being stuck with another student or boomer and having to kinda do his work as well as my own till he learns the ropes, leaves me not feeling too hot as we head toward the 5-Spot to get our beans.

Jo Ann is up to her neck in work, what with a counter lined with hungry rails and truck drivers. But she's graceful as an antelope, even when she deals seven cups of Java off one arm. Pretty soon she gets a slight pause in customer demands and comes over to me. She gives me a nice smile, then lowers her voice.

"Hank Speers lost his job as truck driver," she confides.

"It's his own fault," I remark.

"But I hate to see anybody lose their job," she argues.

"He can get another one," I shrug it off. "And," I add, "how about seeing you when you get off shift tonight?"

"I'll be waiting," she dimples, even though some ignorant cat skinner is bawling for a second helping of pie with a slug of ice cream on top as she leaves me.

I ain't sorry about Hank Speers losing his job. Any cluck who drives across a railroad against wig-wags that clang and swing and with an engine whistle blowing ought to have his head examined. But I'm beginning to wonder just why Jo Ann is so interested in the big ape. I decide I'll ask her a few questions when I take her home. Playing it strategic-like, I wait till we're all the way to where Jo Ann lives before I remember about Hank Speers and his job. "You seem to be kinda put out about this dumb cluck trucker bein' fired," I remark.

"I think it's a shame," she says, her big, dark eyes glowing in the soft moonlight.

"Personally," I shrug, "I ain't worryin' none about it."

Jo Ann has a quick temper. "You should be," she says. "It's your fault."

"My fault?" I gasp. "It's my fault, him drivin' his truck in front of our engine?"

"It's your fault that you magnified his part of it," she snaps.

"So he's cryin' on your shoulder for sympathy, huh?"

"He hasn't done any crying. You told me all about it yourself. You even crowed about it."

"Maybe ya better go to his boss an' put in a good word for him," I growl, mad all over.

"Perhaps I shall." The front door slams leaving me standing there with no other company than a hoot owl who roosts in a nearby tree mournfully crying, "Who-o-o. Who-o-o."

My luck has not improved next day when I arrive at work and find the new switch engines have been assigned. I'm looking over my switch lists when the new man I'll have for a helper barges into the yard office. I glance at him. Then my mouth flops wide open, for he is none other than Hank Speers, the ex-truck driver!

Not able to believe it, I croak some foolishness like: "Are you my helper?"

"That's what they told me when I hired out," he says, looking and sounding as cool as a ice cube.

"I thought you was a truck driver," I argue.

"I was till you dumped over my apple cart, which wasn't appreciated none by me."

"Do ya know anything about switchin' boxcars?" I demand.

"Enough to get by. With you," he adds with kind of a sneer sharpening in his voice.

"What do ya mean by that crack?"

"You lost me my truckin' job, didn't ya?" he shoots back.

"I didn't lose nobody nothin'!" I explode. "So if ya figure on evenin' up a grudge by tryin' to put me behind th' 8-ball, you're all wet."

Hank grins coldly. "The best of 'em pull boners now an' then." He changes

the subject. "Where do ya want me to work?"

"Right against th' iron," I inform him, meaning he'll follow the engine and pull pins.

While he unwraps a package containing new overalls and gloves I give him the onceover. His gray eyes carry a twinkle and his stubby nose is pugged. His mouth is wide. He ain't exactly a homely fellow and if he ain't here to pin something on me, I'd kinda like the big ape.

You can tell a carhand the first time you see him hit a footboard. I'm watching Hank when he motions our engine ahead. He eases on with no effort. And by the way he gives signals and takes same, I know he's been around railroads plenty.

That's the bad part of it. Hank Speers is a carhand. He knows where he belongs all the time. He never misses a pin. He gets my signals perfect even when I give him some extra fancy ones. I been hoping he'll be such a washout I can lay him in the Beak's lap. No soap there.

We don't speak except in the line of dust. All the way across town we do our work. He watches every move I make, like he's hoping I'll bust up some equipment. Only I'm too smart for that, or so I think.

Jo Ann is still sore at me when we go up to the 5-Spot for beans. But she smiles sweet as sugar at Hank and even talks in a low voice to him. My only consolation is that when I ask her if she'll meet me after work she nods her head.

When Hank's been working about ten days, everything has calmed down as smooth as a pond on a windless day. Then the local train brings in a boat which is loaded on a flatcar. This is quite a boat, being a war surplus deal. She's all steel with a husky motor and I reckon she weighs about six or eight tons. She's well braced on this flatcar. The number of the car is C.N.W. 42501. I remember that number because of following events.

Since the boat is gonna be a "hold" load, I decide to dump her into Track 3, which is a storage track. I do this while I'm batting out the local, and I kick the flat too hard, having my mind on too many things at once.

It lopes right on down the lead and finally smacks into half a dozen center dumps loaded with sand and gravel.

That damned boat jumps up in the air. Wood splinters and dust flies and next thing I know the boat is sagging on her side, about to fall off the flatcar.

Hank Speers ambles up looking like a cat who's just eat the pet canary. "Kicked it kinda hard, didn't ya?" he remarks acidly.

"It musta been a poor job of blockin'," I reply.

He gives a nasty laugh and walks away.

I stand there knowing if this accident results in an official investigation Hank will cough up his gizzard and I'll be hunting a new switching job. I've got to do some tall thinking, and fast! A million alibis pop into my mind during the next few minutes. But none of 'em will hold water.

I console myself with the fact that I got five days in which to figure out a passable alibi. That's the length of time that generally elapses between date of accident and the formal investigation.

We get the rest of our cut switched out with no further trouble, and I go into the yard office for my latest pickups. I'm in there about ten minutes. When I come outside, ready to depart with our cut, I look around for my two helpers. My field man is resting his carcass on the end of a tie at the rear of our cut. Hank is nowhere in sight. But by the time I get to our "coffee grinder," which is what we call these Diesel-electrics owing to the way they go "clumpety-clump" when they're idling, Hank shows up, hurrying toward us from the direction of Number 3 track where the badly used boat is sitting on C.N.W. 45201. His homely face has got a very curious expression on it.

I'm tempted to ask him point blank just what in hell he's been doing over there, and then punch him in the nose before he can answer. But for once I hold my temper and keep my mouth shut.

THAT'S how things stand for the rest of the shift. When we finally get to the yards, Oliver, our lanky, even-natured car toad meets me. Oliver is a good plug, close to his pension, and all of us swear by him because he'll cover up for us any time he can. We likewise do little favors for him, like bleeding off a cut of cars and coupling air hoses.

"You ain't made out your accident report on that C.N.W. flat with the boat, have ya, Pete?" he asks me.

"No. I been tryin' to figure out a good alibi," I tell him.

"Alibi?" he asks surprised. "You got all the alibi you need."

My mouth drops open. This is too deep for me.

"Didn't you find what was wrong?" he wants to know.

I feel like hugging him. Good old Oliver has come to the rescue once more. Talk about a pal! But I don't want to act ignorant. "Wel-l-l," I say doubtfully, dragging it out.

"That drawbar key musta dropped out just before ya made that last shove toward Number Three," Oliver enumerates. "The drawbar didn't pull out. It just came far enough to lift the pin on the couplin'. I hunted all over for it, but darned if I could find it."

"Yeh," I agree, slapping him on the back. "It might have dropped out anywhere. An' thanks."

Oliver is shaking his head. "I still can't understand where that damned drawbar key coulda went to," he says, half talking to himself.

Oliver can sure put on a show when he's a-mind to. I enter into the spirit of the thing. "Neither can I," I say. "It's the first time anything like that ever happened to me." And I head toward the yard office.

A telegram is waiting for me inside. "Give full details of cause of damage to boat loaded on C.N.W. 45201." It's signed by the superintendent.

I'm laughing up my sleeve as I sit down to make out the accident report. When it's through, I figure it's quite a fiction masterpiece. I sign it. My whole crew reads it and affixes their signatures. Hank carefully peruses it from beginning to end. Then he signs it. But he gives me a knowing look as he hands it back. "Seems okay," he grumbles.

I heave a sigh of relief and resolve to do all future switching strictly by the book of rules.

It's Sunday almost a week since I messed up the boat, and wheels are turning so smooth I know it can't last. Now Sundays are generally very light so far as work is concerned. Some Sabbaths we don't have over an hour's work, all told. This one is no exception. When I report for duty, about all the jobs we face won't take an hour.

I hammer them out fast and we head for the switch shanty to play a few games of pinochle at two bits a game and ten cents a set. I figure that about 8 p.m. we'll buzz over to the 5-Spot and I'll see Jo Ann, straighten things out, and take on a feed.

Hank don't play pinochle. So when he asks me if he can slip off for a couple of hours, I consent.

By 8 p.m. I'm stuck for three games and half a dozen sets, and I ain't feeling too happy when we climb on the coffee grinder and head toward 101 Highway and the 5-Spot. Hank ain't come back as yet, which is okay, his presence being unnecessary.

We troop into the 5-Spot. I'm ready to greet Jo Ann with sugar in my voice and love in my eyes. But that decision is blasted when I see Hank Speers sitting down at the end of the counter with Jo Ann leaning across, talking low and confidential, and their heads too close together. When Jo Ann sees me enter she moves back with what I take to be a guilty look. But her pretty lips part in a smile of welcome and her dark eyes light up. Hank don't seem embarrassed. He slowly turns on his stool and nods.

"I figure you'd be showin' before long," he says.

I just grunt, this being a time when words might grow too heated. We line up

at the counter and I grab a menu. Jo Ann touches the back of my hand and I tingle all over, but I'm still jealous.

"What's the matter, Pete?" she asks softly. "Don't you feel well?"

"Not too hot," I reply.

"Our fried chicken is delicious," she changes the subject.

I shake my head. "Just a cupa Java to begin," I tell her. "Maybe I'll be hungry later."

We ain't got a thing to do but loaf. So none of us hurries with his meal. After all, today is Sunday. Our work is done. Nobody but an idiot would be out spying on us, even this new assistant trainmaster. I'm giving him credit for being a Christian on a Sabbath.

So it's about 9:30 p. m. when we finally leave the 5-Spot. Meanwhile my appetite has come back and I've put away a whole slug of fried chicken. I've even forgot the way Jo Ann and Hank had their heads together when we came in. I've promised Jo Ann to meet her and take her home.

Our coffee grinder still sits where we left it, backed into Issacson's spur. The motor still goes "clumpety-clumpety-clump." I start to climb on the back end when somebody comes out of the shadows. This somebody is a very well-dressed individual and a total stranger to me at the time.

"My name's Mangle," he introduces himself. "I'm the new Assistant Trainmaster," he adds, giving it capitals.

"I'm Pete Jackson, foreman on this job," I acknowledge.

He solemnly pulls out his watch and looks at the time by the light of my electric lantern. His thin lips purse up. "I suppose you've read my recent bulletin regarding the twenty-minute meal period?" he asks.

"I read all the bulletins," I agree.

"But you seem to ignore some of them," he worries, "particularly the one about the meal period."

I make no reply.

"According to my watch," he resumes, "you and your crew have taken about one hour and thirty minutes for your meal period tonight. Is that correct?"

"I ain't in the habit of timin' my meals," I hand it right back at him. "I sit down to eat, not to watch a clock!"

"It's time you learned to watch hours and minutes, and bulletins," he says.

"Is that all?" I inquire, holding myself in.

"That's all. But you'll hear from me very soon." With which threat this Mangle marches hisself away, back stiff as a ramrod.

Two days later we receive notice that a formal investigation will be held the next day to "fix responsibility for crew taking one hour and thirty minutes for meal period in violation to recent bulletin . . . Bring a representative if so desired," the summons concluded.

I get busy on the phone. Our regular griever, an up-and-coming engine foreman, is taking a vacation. This certainly puts me in a hell of a spot. I can't think of another man who might do a good job as representative. I finally conclude to represent myself, which will give Mr. Mangle all the advantage.

WE MEET in the trainmaster's office to find that Mr. Wilson, our assistant superintendent is holding the investigation. Mr. Mangle is there, wearing a smirk of confidence on his mug. Somebody is gonna get hanged, and that somebody is gonna be me. In fact, I can feel the rope around my neck even as I take a seat.

The investigation begins with the usual questions. "Do you have a Book of Rules? Are you familiar with same?" and so forth.

"Have you a representative?" Mr. Wilson wants to know.

Each one of us reply the same to that: "No," until it comes to Hank Speers. He astounds all of us by replying. "I'm gonna represent myself. If the rest of the gang want, I'll represent them, too."

I almost protest, but then I figure, what's the difference? The big ape can't make it any worse than it is.

When I'm asked if I take an hour and thirty minutes for our meal period I say I did not pay any attention to the time. Each member of the crew tells Mr. Wilson the same thing, even Hank Speers.

Mr. Mangle is almost licking his chops, and I feel like getting up and punching him in the nose, but I manage to restrain the desire.

I start to climb on the back end when Mangle appears from the shadows

After all the testimony has been taken, Mr. Wilson says, "It seems quite evident that this crew deliberately violated that article in their schedule regarding the time allowed for meal period. In addition, they flagrantly violated a recent bulletin issued under the signature of the assistant train-

master, Mr. Mangle." He pauses and taps the desk top with a pencil. "Since our yard crews are in charge of engine foremen, and said foreman is held responsible for all services performed, it would seem that Mr. Jackson is the chief offender."

"That's right on any man's railroad," agrees Hank Speers, our representative.

I'm so mad I can't say a word. So this is the way that double-crosser is gonna represent me?

"Only one thing remains," Hank goes on, almost drawling his words. "An' that's to prove Pete Jackson allowed us to use an hour an' thirty minutes for our beans."

"It seems that matter has been conclusively proven," snaps Mr. Wilson.

"I want to dispute that," grins Hank. "Can I ask a few questions.?"

Hank turns to me. "Mr. Jackson," he says, "do you have a standard railroad watch?"

"Of course," I say, disgusted. Of all the dumb questions.

"When did you have it inspected last?" Hank goes on.

"About a week ago," I reply.

"Did our railroad watchmaker inspect it?"

"Sure. It was okay."

"Thank you, Mr. Jackson," Hank beams.

He asks all the rest of the crew the same question. Then he says: "I likewise have a railroad watch which was inspected no later than yesterday."

There's a moment of silence. We're all wondering what the hell he's driving at. Me, I can't see we're getting any place. Then Hank turns to Mr. Mangle.

"Mr. Mangle," he asks in his lazy drawl, "do you have a standard railroad watch?"

Mr. Mangle smirks and says, "I certainly do have a standard railroad watch."

"Fine," beams Hank. "And may I ask when your watch was last inspected by a railroad jeweler?"

Mr.Mangle's face loses some of its smirk. "Having only been recently promoted from a yard clerk to an official," he sputters, "does not make it necessary for me to have my watch inspected." It is not a remark that makes sense.

"You have a railroad watch," Hank says sweet as sugar, "but it ain't ever been inspected?"

"That's right," explodes Mr. Mangle. "But I don't see what that has to do with this investigation!"

Hank faces Mr. Wilson. "It has everything to do with this investigation," he says. "This man," nodding toward Mr. Mangle, "claims our crew used one hour and thirty minutes for meal period. He bases his claim on a watch that ain't never been inspected by a railroad jeweler. For all we know his watch might be an hour fast, or slow, or not even runnin'. I move that all findings of this investigation be stricken from the records an' the whole thing called off!"

I'm beginning to love Hank Speers. This particular investigation winds up in nothing flat. The whole thing is called off. What Mr. Wilson tells Mr. Mangle in private we have no way of finding out. But shortly thereafter Mangle is demoted back to a yard clerk.

Meanwhile I'm outside, waiting for Hank.

When he approaches I shove out my right hand. "You big palooka," I grin as we shake, "an' me all this time thinkin' you was tryin' to get somethin' on me."

He shrugs. "Maybe I was, at first," he says. "But dammit! I ain't a truck driver. I'm a railroader. An' it didn't take me long to find it out after I got back in the game.

"If you hadn't got me fired off my truck job, I wouldn't have gone back. Likewise, if it wasn't for that girl friend of yours, Jo Ann, me an' my missus would still be fightin' an' a-feudin'. Jo Ann wrote the missus an' she's movin' up here right away."

"One more thing," I say to him. "About that drawbar key off that flat with the boat on it—"

Hank laughs. "I reckon it's still layin' in the weed patch where I tossed it after I took it out," he informs me.

"I always get a kinda creepy feeling when I'm hoggin' on these here circus trains . . ."

Locomotives of the Chesapeake & Ohio

Steam Locomotives

Class	Numbers	Cylinders	Drivers	Pressure	Engine Weight	Tractive Effort	Builder and Date
			0-6-0 (Switcher) Type				
C-3	15	19 x 24	51	160	111,435	23,100	Baldwin, 1900
C-6	125, 129	20 x 26	51	180	131,750	31,200	Alco, 1907
C-6	128	20 x 26	51	140	131,750	24,250	Alco, 1907
C-7	25–33	20 x 28	56	180	142,300	30,600	Alco, 1905–06
			0-8-0 (Switcher) Type				
C-14	70–79	25 x 28	51	185	221,000	53,950	Lima, 1926
C-14	100–109	25 x 28	51	185	221,000	53,950	Lima, 1925
C-15	110–124	25 x 28	51	185	228,340	53,950	Baldwin, 1929
C-16	175–239	25 x 28	52	200	240,000	57,200	Alco, 1930
C-16	240–254	25 x 28	52	200	244,000	57,200	Lima, 1942–43
			0-10-0 (Switcher) Type				
C-12	130–144	27 x 28	51	185	295,000	62,950	Lima, 1919 & 21
			2-8-0 (Consolidation) Type				
G-3	150–159	23 x 30	57	205	241,000	48,500	Alco, 1910
G-4	160–169	23 x 30	57	205	244,000	48,500	Alco, 1910
G-5	700–709	23 x 30	57	205	244,000	48,500	Alco, 1911
G-7	790, 817, 828, 850, 851, 867, 872, 873, 876, 882, 884, 893, 904, 913, 918, 926, 946, 947	22 x 28	56	200	184,400 200,675 202,000	41,150	Alco, 1903–07
G-7-S	960-1001	23½ x 28	56	185	200,675	43,400	Alco, 1903–06; Baldwin, 1907
G-8	710 711	22 x 30	56	185	206,200	40,750	Alco, 1907
G-9	1010 1059	22 x 28	56	200	199,900	41,150	Alco, 1909
G-15	1085	22 x 28	56	200	204,000	41,150	Alco, 1916
			2-8-2 (Mikado) Type				
K-1	1089–1098	29 x 28	57	180	323,000	64,950	Alco, 1912–13
K-1	1100–1155	29 x 28	57	180	323,000	65,200	Alco, 1912–14
K-2	1160–1209	28 x 30	63	200	358,000	*63,450	Alco, 1924
K-3	1210–1259	28 x 32	63	200	355,000	67,700	Alco, 1924
K-3	2300–2349	28 x 32	63	200	358,000 359,000	67,700	Alco, 1926
			2-8-4 (Berkshire) Type				
K-4	2700–2749	26 x 34	69	245	460,000	*69,350	Alco, 1943–44
K-4	2750–2759	26 x 34	69	245	468,900	*83,350	Lima-Hamilton Corp., 1947
K-4	2760 2789	26 x 34	69	245	468,900	*83,350	Alco, 1947
			2-10-2 (Santa Fe) Type				
B-1	2950–2959	29 x 32	63	205	374,100	74,450	Baldwin, 1919
B-2	2000–2005	30 x 32	63	200	377,300	77,700	Baldwin, 1918
B-3	4000–4001	29 x 32	64	210	395,000	75,050	Alco, 1917
			2-10-4 (Texas) Type				
T-1	3000–3039	29 x 34	69	265	566,000	*93,350	Lima, 1930
			2-6-6-2 (Freight Articulated) Type				
H-3	1275–1299	22 x 35 x 32	56¼	200	437,000	74,200	Alco, 1918
H-4	1325–1474	22 x 35 x 32	56¼	200	425,000 428,000 434,400 437,000 435,000	74,200	Alco, 1913–17
H-4A	1470	19¼ x 19¼ x 32	56¼	210	450,500	75,250	Alco, 1917
H-5	1520–1539	23 x 35 x 32	57	200	448,000	75,650	Alco (15), 3919; Baldwin (5), '19
H-6	1475–1494	22 x 35 x 32	56¼	210	441,000	77,900	Alco, 1920–21
H-6	1495–1519	22 x 35 x 32	56¼	210	449,000	77,900	Alco, 1923
			2-6-6-6 (Freight Articulated) Type				
H-8	1600–1644	22½ x 22½ x 33	67	260	771,300	110,200	Lima, 1941 44
			2-8-8-2 (Freight Articulated) Type				
H-7	1553 & 1560	23 x 23 x 32	57	215	567,500	108,550	Alco, 1924
H-7	1507–1589	23 x 23 x 32	57	215	572,330	108,550	Baldwin, 1926

Photo by Richard E. Prince, Jr., 1111 Larchmont Crescent, Norfolk, Va.

Only switcher used by the C&O in Norfolk Yard and oldest and smallest engine on the system is Baldwin-built 15

Photo by Robert J. Foster, P. O. Box 375, East St. Louis, Mo.

Among the most powerful steam switchers ever built is the C-12 class. Here's Number 139, ready to work the Toledo, Ohio yard

Photo from collection of Richard W. Biermann, 4338 - 20th St., San Francisco, Calif.

Mikado 1206—a good example of the workhouse engine of the C&O—getting ready to pick up a manifest in Chicago

Photo from Railroad Photographic Club

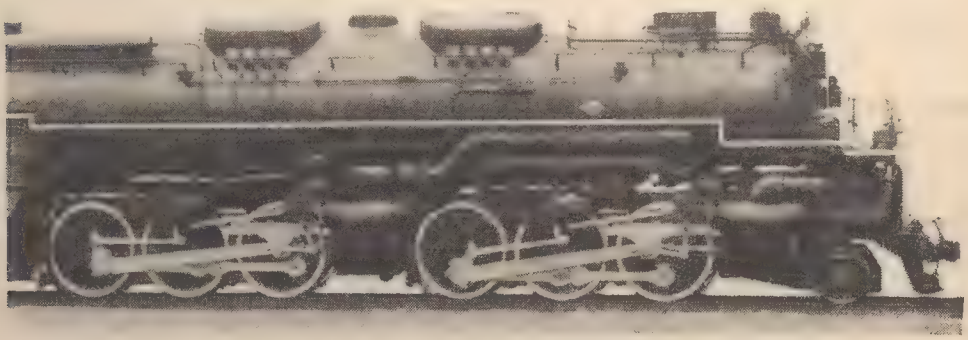
Among F-19 Pacifics not converted into streamlined Hudsons is the 492, which carries everything but the engineer on her smokebox front

Chesapeake & Ohio's Allegheny type will probably never be surpassed

Sired by the Pere Marquette, C&O's Berkshire is a natural successor to the

Class	Numbers	Cylinders	Drivers	Pressure	Engine Weight	Tractive Effort	Builder and Date
			4-4-0 (American) Type				
A-16	275–277	22 x 26	73	185	201,600	27,100	Alco, 1902
A-16	278–293	23 x 26	73	185	199,500	27,100	Alco, 1903–05
			4-6-0 (10-Wheeler) Type				
F-11	377–378	19 x 26	62	180	143,500	23,150	Baldwin, 1902
F-13	89 & 91	19 x 26	73	180	188,000	24,050	Alco, 1912–13
F-13	90	21 x 26	73	170	188,000	22,700	Alco, 1912
			4-6-2 (Pacific) Type				
F-15	430	23 x 28	73	186	213,100	31,050	Alco, 1902
F-15	431	23½ x 28	73	190	237,400	34,200	Alco, 1902
F-15	432–456	23½ x 28	73	180	237,400	32,400	Alco, 1903–11
F-16	460–467	27 x 28	74	185	290,000	43,400	Baldwin, 1913
F-17	476–475	27 x 28	74	200	340,600	46,900	Alco, 1914
F-18	480–485	27 x 28	74	200	340,600	46,900	Alco, 1923
F-19	491–493	27 x 28	74	200	331,500	46,900	Alco, 1926
			4-6-4 (Hudson) Type				
L-1	490 & 494	27 x 28	74	210	388,700	*49,200	C&O Shop, 1946
L-2	300–307	25 x 30	78	255	439,500	*52,000	Baldwin, 1941–42
			4-8-2 (Mountain) Type				
J-1	540–542	27½ x 28	62	200	330,000	58,100	Alco, 1911–12
J-2	543–549	28 x 30	69	210	363,550	60,850	Alco, 1918, '23; Baldwin, 1919
			4-8-4 (Northern) Type				
J-3	600–604	27½ x 30	74	255	477,000	*66,450	Lima, 1935
J-3	605–606	27½ x 30	72	255	503,500	*68,300	Lima, 1942

**Tractive effort without booster.*



in articulated engine design. Compact. Handsome. Powerful. Fast

Mikado type, combining the 2-6-2s tractive effort with greater horsepower

On the Spot

TEA KETTLES. You may have read Kenneth T. Wilbur's pro-Diesel letter (Feb. '48) in which he said: "I am fed up with the sentimental mush about leaky old tea kettles that should have been scrapped before I was born (25 years ago)." Among the readers taking exception to this criticism is John Holmes, 23 Park Terrace, Charlottetown, Prince Edward Island, who writes:

"Those 'leaky old tea kettles' during the 1890s did better than a mile a minute in England. That was half a century ago; today's steam engines certainly do better. Mr. Wilbur claims that the noise, smoke and cinders are reason enough for scrapping all steam power. He should know that modern passenger cars are not bothered by cinders or smoke and very little by noise.

"The steam engine should not need as many repairs as the Diesel. Any automobile owner can inform you that the older his engine, the higher the maintenance cost. This applies to Diesel locomotives also."

We now hear from Robert E. Dudgeon, 1820 Jefferson St., Madison 5, Wis.: "One aspect of the steam-Diesel controversy seems to have been overlooked in the *Spot* department. Are Diesel locomotives a wise investment for railroads in view of the country's diminishing oil reserves? Even with hydrogenation of coal, it seems doubtful that oil will continue to be plentiful enough to sell at prices which now give the Diesel a slight advantage over steam.

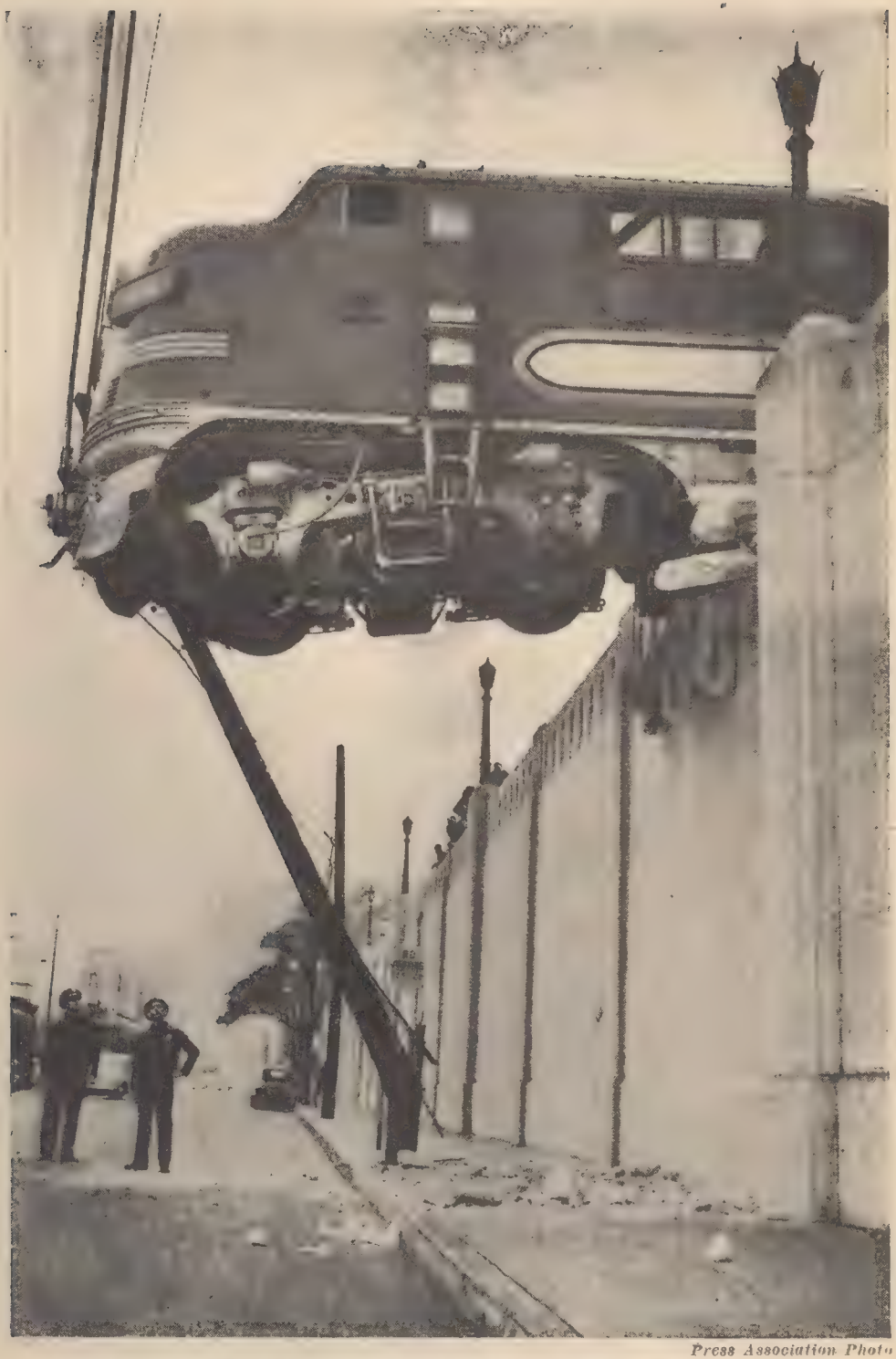
"Modern steam power such as the New York Central's Niagara type is establishing performance records previously not dreamed of for locomotives. And they burn coal, of which geologists estimate that we as a nation have from 3000 to 5000 years' supply. It seems that the railroads are blindly following one another without looking carefully into the future. Most of the arguments for Diesel power are based on present conditions. What will conditions be ten years hence?

"I firmly believe the modern reciprocating steam locomotive has a much healthier future than the Diesel. If public opinion is largely pro-Diesel, it is mainly because of strenuous advertising by General Motors and the railroads themselves. On the other hand, if steam locomotive builders had not seemingly sold the iron horse 'down the river' but had actively continued to advertise its merits to the public, the present public attitude would probably be anti-Diesel.

"Last winter a multitude of homes lacked fuel oil because so much of the supply was being loaded into Diesel fuel tenders. As the Chesapeake & Ohio says, "It's time to wake up America." Readers interested in performance data can consult *Railway Age* for last Aug. 30, which carried tables of operating costs, etc., of NYC Niagaras (4000 hp.), 6000 hp. Diesels, and electrics. There is an eye-opening table showing that the Niagara can accelerate to 60 and 85 miles per hour in less time than a Diesel!"

* * *

NATIONALIZATION of railways has been in effect in Great Britain since Jan. 1, this year, when the four British railway systems passed into ownership of the British Transport Commission under the Transport Act. Arthur J. Richards, 21 Briarfield Road, Tyseley, Birmingham, England, sent us details of this sweeping change. The new setup is known simply as British Railways. The external alterations are being made gradually. To mention but one feature, the familiar colors identifying each company's equipment will eventualy be replaced by one common standard. As a provisional measure, the lines are organized as follows:



Press Association Photo

In flagrant disregard of "No Parking" sign in street below, Santa Fe's ***El Capitan*** 4-unit Diesel poised itself across a $3\frac{1}{2}$-foot parapet near Los Angeles' Union Terminal

London Midland Region. Headquarters, Euston, London. Corresponding to the London, Midland & Scottish Ry. in England and Wales.

Western Region. Headquarters, Paddington, London. Corresponding to the Great Western Ry.

Eastern Region. Headquarters, Liverpool St., London. Corresponding to the southern area of the London & North Eastern Ry.

North Eastern Region. Headquarters, York. Corresponding to northeastern area of the LNER.

Scottish Region. Headquarters, Glasgow. Corresponding to the Scottish systems of the LMS and LNER.

Altogether, British Railways have 52,000 miles of track, 20,000 locomotives, 40,000 passenger coaches, 600,000 freight cars and 63,500 men and women employes.

One of the locomotives is LNER Number 6000, about which an interesting story is told. Early in 1947 some Dutch engineers visited Britain to discuss mutual problems of electrification. From these meetings it was decided that valuable data could be obtained if a British locomotive could be run experimentally on the Netherlands Railroads. Accordingly, Number 6000 was shipped to Holland on the Harwich Zeebrugge train ferry. She has since completed more than 10,000 miles on foreign soil, hauling both passenger and freight trains ranging from 350 to 1600 tons. The information thus acquired is proving helpful. As a result, LNER decided to build 84 new locomotives of the same type, incorporating the lessons learned.

The balloon barrage which dotted the wartime skies over London is now working for the British Railways. One of these blimps was used recently in experiments to determine the proper height at which powerful spotlights should be suspended over freight yards in order to insure the maximum light for night freight operations. Not until recently have the British felt the need of brilliant illumination of freight yards such as America has known for years. Now, however, the nation's production and transportation facilities are being speeded up to the maximum.

J. C. Reay, 1 Conyers Gardens, South Pelaw, Chester-le-Street, County Durham, England, comments on an item we printed about some LNER engines bearing the names of characters in Sir Walter Scott's novels.

"These engines," he writes, "were not named recently. They were 4-4-0 North British Ry. classes F and S, built by that company in 1904-'11, designed to compete with the North Eastern's class R's for the East Coast trains between Berwick and Edinburgh. They were named when built and have carried those names ever since."

* * *

APPRECIATION. The Burlington Road doesn't know it, but it is still getting returns on a free ride of 36 years ago, according to Mrs. Don W. Wilson, 2482 Adams Ave., Columbus, O.

"The year my father reached his eighteenth birthday," she writes, "he lost both parents and was thrown out of work. Jobs in his town were very hard to get, so he bummed his way on the rails in hope of finding employment in some other section. No luck! Upon reaching St. Louis, however, a telegram from his uncle awaited him. It read: 'If you can get back home in two days I can get you a job.'

"Dad's pockets were too empty to allow him to pay fare, so he tried the freight yards again. But every time he hid himself on a train, cinder dicks rooted him out—until he got into a Burlington boxcar. Two yardmen pulled back the door and flashed a light in his frightened face One of them said: 'It's just a kid. Let him ride!'

"Dad got home in time to land the job, with a large railroad company, and is still at it after 36 years. During this time millions of tons of freight routed through St. Louis have passed through his hands. If a load is to be transferred to an unspecified railroad there, Dad, through gratitude at first and now habit, routes it whenever possible by CB&Q. He estimates

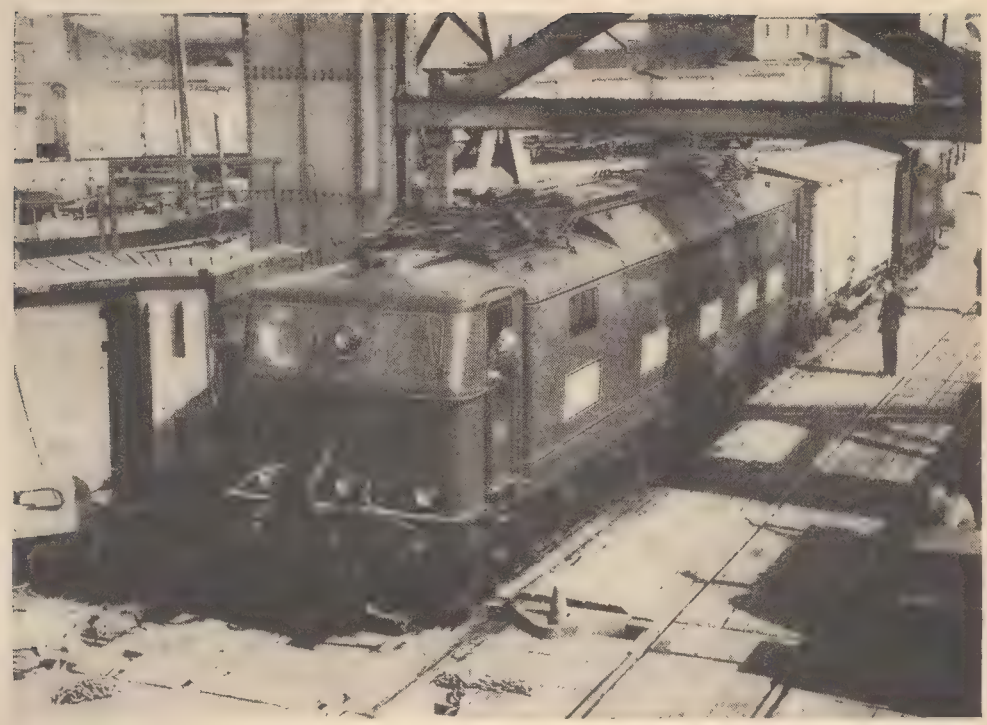


Photo from Harris & Ewing

LNER's Number 600 helped settle Dutch electrification problems. *Above*, boarding Harwich Zeebrugge train ferry for trial runs on the Netherland Railroads

that in this way he has sent more than a half-million dollars worth of business to the Burlington in payment for his free ride."

* * *

BLIZZARD of '88, one of the worst in modern history, severely overtaxed the Santa Fe's fuel-supplying facilities, recalls George W. Bolds, who was then living at Ingalls, Kan., but now resides at 55 Tiemann Place, New York 27, N. Y. It seems that the Atchison, Topeka & Santa Fe owned the coal mines at Canon City, Colo., and was the only source of coal supply for people living along the lines.

At each town the railway would appoint as fuel agent some chap who had cash enough to build sheds and to pay for a few carloads of coal. Both wholesale and retail prices were fixed by the railway. A customer would have to pay spot cash before he could unload coal he had ordered. When the western third of Kansas was open for settlement in the early 1880s, the Santa Fe had only a few towns along the line to supply and was doing very well. But when about 100,000 new settlers began demanding fuel, the company developed a grand headache.

"A cousin of mine, Charley Reicheldeffer," writes Mr. Bolds, "secured the agency at Ingalls to sell coal in that district. With mild winters he had no trouble. But when the hell-roaring blizzard of '88 broke and the thermometer sank so low that zero weather was considered a warm spell, the demand for coal exceeded the supply. The price rose from $10 to $12 a ton.

"My cousin, who was not good at arithmetic, said to me: 'George, I'm in a fix. They charge $12 a ton for coal and allow only 500 pounds to each customer. I could figure the cost at $10 per ton, but I don't know what to charge now and I don't want to lose money.'

"So I worked up a list for him. But the

Typical yard engine on the Asbestos & Danville, a Johns-Manville Co. road, which last year handled more than six million tons of freight

Photo from W. G. Cole, 741 Canning St., Montreal, Canada

cold spell lasted so long that fuel ran out. The settlers became desperate. They raided snow fences along the line, using them for fuel, and even tore the wires from fence posts, which they carted away, to keep from freezing. They also used buffalo chips and twisted hay.

"At this point the Arkansas River was about 1½ miles wide and four feet deep. In many places it froze clear through to the bottom. Later, when the settlers sawed ice from the river, they would occasionally saw into a large catfish caught in the freeze or a jackrabbit blown into the river by the gale."

* * *

TWO short lines perished last winter. The 15-mile Scranton & Spring Brook, a narrow-gage road dating back to 1850, was sold to the Scranton (Pa.) Spring Brook Water Service Co. at a sheriff's sale for $327, to be scrapped. And down in Bermuda the long-delayed advent of the automobile to that tourist island proved fatal to the 20-mile, Government-owned Bermuda Railway. Until recently no motor vehicles were allowed on the island. The railway flourished for 17 happy years, but was finally doomed when the Government lifted its ban on the tin lizzie.

* * *

SENIORITY list of *Railroad Magazine* readers carries at or near the top the name of R. G. Harn, Asbestos, Que., Canada, who began with our very first issue (Oct., 1906) when he was 12 years old. "Somebody sent my father a sample copy of that first issue," he writes, "and I persuaded Dad to subscribe immediately. Since then I have missed very few copies. For many years I have been a dispatcher on the Asbestos & Danville Ry. here in Quebec. This road is but 30 miles long but handles a disproportionately large tonnage.

"I guess the A&D is the champion locomotive-boomer road. Listen to this: Numbers 20, 26 and 27 came from the New York Central, Numbers 29, 30 and 31 from the Detroit Terminal, Number 28 from the Canadian National, Numbers 34 and 35 from the Fairport, Painesville & Eastern, Number 33 from the Detroit & Mackinac, and finally last summer Numbers 38 and 39 were bought from the Missouri Pacific. All these engines are 0-6-0's.

We also have two 0-8-0's for heavy freight work, Number 25 from the Newburgh & South Shore and Number 32 from the Delray Connecting RR., Detroit; and Number 36, but I do not know where she came from, plus three electric locomotives for rock haulage.

"The A&D is owned by the Johns-Manville Co., serving the huge asbestos mine here. It connects with the CNR. Incidentally, my father was a Central Vermont roadmaster more than 25 years."

* * *

KING SNIPE Bob White of the Grand Trunk Western, Saranac, Mich., writes: "A train running 60 miles an hour will not ride as smoothly as one going 40 because cars that travel with

less speed have more time to get righted after the wheels have met a 'spot' out of line, level or gage. When running along evenly, the cars suddenly swing to one side if, on a tangent track, the spot is low on the side toward which the cars swerve.

"A bad gage or line will feel the same. On a curve if the cars swing toward the high rail, there is not enough elevation at that spot. However, if they swerve toward the inside or low rail, there is too much elevation. A low joint will cause the care to swing to the joint side. If the joint is on the high rail of a curve and out of line, or hooked in, it will throw the cars toward the low rail on the curve. A sag on the tracks, and you're riding an elevator.

"Every little movement of a passenger train has a meaning of its own to the trackmen. In the old days a roadmaster would throw off a butterfly (note of instruction or reprimand) to the first gang he passed and have the spot repaired. Nowadays he gets the king snipe coming and going, as he can wire back and, upon his return, concentrate upon finding more spots."

* * *

IF YOU EVER decide to get stalled in a blizzard in a wild, uninhabited region, be sure to pick a spot near a railroad track. Your chances of being rescued will be much greater. Jim Chirgwin of Bozeman, Mont., learned this lesson last winter, according to a newspaper clipping from Mrs. F. G. Thearle, 635 Manchester Terrace, Inglewood, Calif.

Jim's car was snowbound, miles from any sign of civilization except the Milwaukee Road track. Night was near. The thermometer was dropping toward zero. Jim started walking the track, almost blinded by falling snow, but kept on walking until he saw the headlight of an oncoming electric freight locomotive. The crew took him aboard and let him off at an electric power substation. There the lonely attendants greeted the wayfarer like visiting royalty and fed him a venison steak dinner. While he was spending the night there, an off-duty attendant with a snowplow pulled Jim's car into Lennep, Mont.

Next morning the through streamliner *Hiawatha* stopped at the substation, picked up the stranded motorist, and shortly afterward made another unscheduled stop at Lennep, where Jim reclaimed his car. He is deeply grateful to the Milwaukee Road.

* * *

SIX BOYS were given a free round trip by the Baltimore & Ohio one day last winter from their home in Cozaddale village, near Cincinnati, O., to Clarksburg, W. Va. They rode *The Cincinnatian*, the same smart-looking train they had flagged to a stop some time before, after they had seen a loaded coal truck stalled in its path. The excursion was the B&O's way of showing gratitude to the lads who had

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Millions turn to Bromo-Seltzer to relieve ordinary headache *three* ways. It's famous for giving fast help. Caution: Use only as directed. Get Bromo-Seltzer at your drugstore fountain or counter today.
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NEURALGIA

Courtesy Chesapeake & Ohio Railroad

Prototype of C&O's new central reservation bureau installed at Huntington, W. Va. There is one table each for east and westbound sleeping car and coach reservations. A five-cent phone call puts you through to this office from key cities all over the United States

bravely prevented a possible disaster to the famous streamliner.

* * *

MASCOT of the North Western's switching crews at North Yards, Milwaukee, Wis., is a brown and white fox terrier known as Rags, reports the *Milwaukee Sun* in a clipping from H. Olsen, 1302 S. 11th St., Milwaukee 4. If you've had to stop your automobile to let a C&NW switch engine go by in Milwaukee during the past 5½ years, you may have seen Rags. He rides switch engines by day, sleeps in the yardmaster's office—an abandoned passenger coach at 313 N. Dearborn St.—and does not take kindly to strangers unless they wear overalls.

Rags made his appearance in the North Yards in 1942. When he found the switching crews liked him, he took over and chased out of sight a belligerent tomcat which had been mascot up till then. This pleased the men, who seemed to prefer dogs to cats anyhow. The fox terrier had lost the sight of one eye, but that did not prevent him from performing an act of heroism that saved a human life within a few weeks after becoming an engine dog.

It was near midnight. An April haze hung over the yards. Rags was perched on the fireman's seat as the engine chuffed westward toward Wabash Ave. bridge. Suddenly the dog leaped seven feet to the ground, dashed ahead of the engine, and stopped short on the tracks, barking furiously. The engineer jammed on the brakes, then stepped down to see what ailed the dog.

He found Rags standing guard over a man who was lying unconscious across a rail. For this, the Anti-Cruelty Society presented Rags with its honor award.

* * *

TAL MOREHEAD'S asking (Feb. '48) if any reader can beat his record for early age (before his 13th birthday) in a railroad career prompted Emmett W.

Nash, 775 Oakwood Ave., Sheffield Lake Village, P.O. Lorain, O., to reply: "I, too, began a few months before my 13th birthday in 1908 as a grease monkey in a Baltimore & Ohio roundhouse. My record follows: *B&O;* engine wiper, clerk, machinist apprentice, fireman, signal maintainer, and machinist; *Boston & Maine:* signalman; *Erie:* signalman, signal maintainer, fireman, and signal foreman; *Great Northern:* signalman; *New York Central:* signal maintainer and electrician; *Cleveland Union Terminal Co.:* electrician; *Pennsy:* signalman.

Claimant for the title "youngest person to take an interest in *Railroad Magazine* is Richard Mozer, 1113 N.W. 14th St., Oklahoma City, Okla., who writes: "I started looking at *Railroad Magazine's* pictures in 1934, when I was only 4 years old. Am now 17 and a member of the Oklahoma City Model RR. Club."

* * *

FATHER-SON crews interest H. L. Beebe, Illinois Central locomotive engineer, 103 S. First St., Champaign, Ill.

"One day recently," he tells us, "I was running a switch engine in the Champaign yard with Fireman L. F. Haney, who had fired for my father several years at Centralia, Ill. This, I believe, is unusual. *(Editor's note: It is.)* My father, L. T. Beebe, was an IC engineer at Centralia, retiring in 1938 after 40 years' service on the St. Louis Division. Another man who fired for him is R. A. Wilkerson, one of the three men (including Fireman Haney) who transferred here from Centralia in '41. Can any reader cite a similar case of the same fellow firing for both a man and his son?

"Seven engineers here have firemen sons. These 14 men are F. R. and D. D. Fulfer, R. C. and R. W. Gibson, C. B. and H. O. Montgomery (the son was recently promoted to the right-hand side), O. E. Leeds Sr. and Jr., C. L. and O. E. Schoen, A. and R. M. Weishaar, and E. L. and J. W. Bassett.

"In freight service here, no engineer gets the same fireman twice in succession,

If a "flat" anchors you just over the hill...tonight

Send your wife back to the crest of the hill to flash a warning signal. Equipped with a WINCHESTER ... the dual-purpose light that throws *both red and white* light rays ... she can warn approaching cars. Then, in safety, you can change wheels with the aid of the brilliant light from your second WINCHESTER flashlight.

IF ALONE, PUT RED-WARNING LIGHT ON HIGHWAY 50 YARDS TO REAR OF YOUR CAR

Play safe. $3.10, the price of these 2 WINCHESTER flashlights complete with batteries, is inexpensive "life protection" for you, your wife and other travelers.

WINCHESTER TRADE-MARK **BATTERIES**

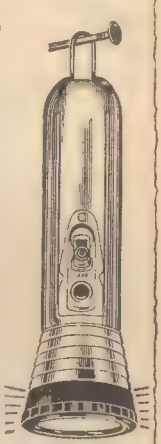
Last almost TWICE as Long!

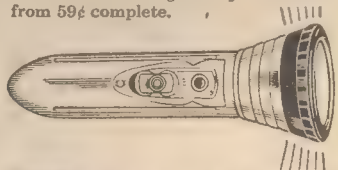
Still cost only a dime. *But, measured by A. S. A. light industrial flashlight test, the Winchester No. 1511 flashlight battery now LASTS ALMOST TWICE as long as previously. Reason? Research found a way to step up the power of the light-making chemicals.

Use them not only in flashlights but also for *any* equipment using regular flashlight-cell size batteries. Winchester Repeating Arms Company, New Haven, Connecticut, Division of Olin Industries, Inc.

(Right) No. 6410 Winchester with hanger; complete with batteries, $1.65.

(Below) No. 4510 Winchester, complete with batteries $1.45. Other Winchester Flashlights at your dealers from 59¢ complete.





DIVISION OF OLIN INDUSTRIES INC.

WINCHESTER TRADE-MARK

FLASHLIGHTS AND BATTERIES

Photos courtesy Southern Pacific

At left above, the lettering job on the first car to be named for a Negro porter; and ***at right***, Oliver Millet on retiring after 45 years' service, 32 on the SP's ***Del Monte Limited***

because we have more firemen than engineers in the chain gang. Occasionally a fireman gets out with his father. Young Fulfer has fired for his dad in both passenger and freight service. Some years ago I saw a Union Pacific fireman, V. A Wilcox, making a trip with his father, A. H. Wilcox, from Montpelier, Ida., to Green River, Wyo. I also saw two brothers go out together, Engr. C. G. Eyre and Fireman H. U. Eyre, on the UP from Rawlins, Wyo., to Green River."

* * *

UNUSUAL station names in Canadian Pacific timetables include Squilax, Spuzzum and Skookumchuck, all in British Columbia, reports Raymond E Keller, 334 12th Ave. W., Calgary, Alta., Canada. He lists also a few CPR female station names: Agatha, Aggie, Dorothy, Margie, Kathleen, Rosemary and Norma, all in Alta.; Dot, Myra and Ruth in B. C. and Bernice and Melita in Manitoba. And a few male names: Frank and Raymond, Alta.; Cary, Ralph, Percival, Leroy and Leslie, Sask.; Douglas and Hugo, Man., and Hector, B. C.

Another Canadian reader, F. W. Chapman, Box 1103, Port Alberni, B. C., tells of a message that recently went around the world to call a CPR lineman, C. Webster, to a broken communication line 20 miles from his home. An Esquimalt & Nanaimo locomotive, Number 926, had rolled 60 feet over the bank of Cameron Lake when she hit a rock slide, taking with her a telephone pole and disrupting all telegraph, telephone and teletype communication with Port Alberni.

News of the wreck was telegraphed to Montreal, then cabled to Bamfield, B. C. via London, England, and Australia. The message was relayed from Bamfield cable station by telephone to Port Alberni, and Lineman Webster, with two other men, left immediately for Cameron Lake with E&N Dispatcher Vincent Rush to repair the break. Nobody was badly hurt. The rock had to be blasted in order to clear the track.

ONLY passenger on a one-car local is the proud boast of John H. Schmidt, 550 Arlington Place, Chicago 14, Ill., who rode the Chicago & Western Indiana's 11:35 a.m. Dolton local.

"The C&WI," he writes, "is best known as the terminal company that owns Dearborn Station and most of the trackage over which half a dozen major roads enter Chicago. It also operates a limited suburban service almost unknown except

to a few residents of an area on the far south side between the Illinois Central and the Rock Island suburban lines.

"Trains leave Chicago for Dolton, 16.6 miles away, five days a week at 6:10 and 11:35 a.m. and 5:22 and 5:43 p.m. The 6:10 also runs Saturdays, as do the 5:43 and a special at 1:18 p.m. There is no Sunday or holiday service. The evening trains are fairly well patronized, but on that noon train half a dozen is a crowd, and a passenger shouldn't feel self-conscious if he finds himself alone in the car.

"The other day I rode the C&WI for the first time, taking the noon train. The Dearborn Station's suburban ticket window was closed, but Information said the train would leave across the street at the mail-express annex. At the annex, after wandering around through piles of mail and down two long lines of empty suburban cars, a trainman directed me to Track 15.

"That track was filled with the small, Tuscan red, lightweight C&WI interurban cars. A small Pacific-type engine was just heading up to the little combine that formed the entire train. We pulled out at 11:35 sharp, our engine backing all the way to Dolton. The conductor said he couldn't change a dollar for my 26-cent fare but that when I got off at 103rd St. I should buy a ticket there and tell the agent to keep it for the conductor to pick up on his return trip.

"We stopped often, but not for passengers—only express and mail. Fernwood (103rd St.) was the first station that looked like an agency depot (except 63rd St., which is a through-train stop). There is a lady agent living in the station. On her window are these two signs: 'Ring bell for service' and 'Buy your tickets here. We work on commission.' So I paid my 26 cents, hoping the conductor stopped off to pick up my ticket on his way back."

* * *

NAMES. Alfrecha, Vt., on the Rutland RR. three miles south of Rutland city, got its name from a combination of Alice, Frederick and Charlotte, the three children of George Chaffe, North Clarendon, Vt., reports Frank W. Kingsley, Pittsford, Vt.

Corning, N. Y., was named for its founder, Erastus Corning (1794-1872), Albany ironmaster and first president of the Utica & Schenectady RR. (now in the NYC System), according to Alvin F. Harlow's book, *Road of the Century.*

Uz, Ky., a town on the Louisville & Nashville RR. beside the north fork of the Kentucky River, has a Biblical name. Here is Locating Engineer W. S. Morton's account of what happened:

"In 1911-'12, when the L&N was building its Eastern Kentucky Division, as one of the construction engineers, I assisted in buying the right-of-way. A section of land in the vicinity of what is now Uz gave us much trouble. We had difficulty in buying right-of-way and contractors disagreed with the citizens, who ran away

Listen here!

Shopping for mystery and adventure tales on your radio? If so, here are clues to good listening. You'll find that each program is a full half hour's worth of real entertainment for one and all.

QUICK AS A FLASH
Sundays, 5:30 p.m., EST.
Detective drama for quiz fans

NICK CARTER
Sundays, 6:30 p.m., EST.
Lon Clark as radio's Nick Carter

SHERLOCK HOLMES
Sundays, 7:00 p.m., EST.
Conan Doyle's stories dramatized

THE FALCON
Mondays, 8:00 p.m., EST.
Romance mixed with murder

QUIET PLEASE
Mondays, 9:30 p.m., EST.
By W. Cooper, writer of "Lights Out"

MYSTERIOUS TRAVELLER
Tuesdays, 8:00 p.m., EST.
Eerie and supernatural tales

RACKET SMASHERS
Wednesdays, 9:30 p.m., EST.
Experts counteract crime

Check local newspaper program listings against possible variations in broadcast schedules.

MUTUAL BROADCASTING SYSTEM, INC.

Type of truck built primarily for handling bulk wheat, but used in general goods haulage on Victorian Government Railways

with their laborers and did other things to delay the work. J. E. Willoughby, chief engineer of construction, who made a monthly horseback trip over the line, heard me complain of that section. Said he: "Morton, you remind me of the man in the Land of Uz who was renowned for his troubles and suffering. His name was Job." Thereoup he gave the passing track its present name, Uz, the shortest name of any station in North America."

Chambers Mills, Pa., on what used to be the Waynesburg & Washington narrow-gage line but is now a standard-gage branch of the Pennsy, was named for Wesley Chambers, who owned and operated a water-powered flour mill. The mill is gone, but the dam is still there and is used as a summer resort. Before the days of the automobile, the W&W ran Sunday excursions up to eight carloads at a time from Washington, Pa., to Chambers Mills.

Another W&W station, McCracken, was named after M. L. A. McCracken, a vice president of the road. Still others—Braddock, Van Kirk, Baker, Hackney, Ringland, Conger, Dunn, Iams, Swartz, and Rees Mill—were named for persons who owned land through which the W&W was built, many of whom donated the right-of-way. Mt. Hermon, on the same line, was named for a famous old church located there. West Waynesburg was formerly called Buchanan, from J. A. J. Buchanan, owner of a mansion overlooking the track.

This W&W data comes from Lyndon C Roach, R.F.D. 4, Washington, Pa. He is assembling information and pix with the idea of writing a history of the road and would appreciate help from readers. Mr. Roach lives half a mile from the Judge Chambers station, mentioned in Oct. '47 *On the Spot*. "I might add," he says, "that of the 23 original station buildings on the W&W only three remain: Baker, now deserted; Dunns, now used as a store and post office, and Rees Mill, now serving as a farm building."

* * *

THE *COLUMBIAN* belongs to the Milwaukee Road, not the Northern Pacific, states F. E. Remus, Jr., Belgrade, Mont., correcting an item in February *On the Spot*, page 140. "The NP, however, does have two morning arrivals in Seattle," he adds, "but you would have to stretch the time limit mentioned in order to include the NP's *Alaskan*, arriving there at 7:15 a.m. *The Columbian* was called *The Olympian* before the Milwaukee placed a Diesel-powered streamliner on a 45-hour schedule between Chicago and the West Coast to match the run of the Great Northern's streamlined *Empire Builder*."

* * *

GROSS'S two-part feature article (Jan., Feb. '48) "Steel Across the Rivers" reminded C. L. Mackey, 216 N. Cardenas Drive, Albuquerque, N. M., of his own experiences for the past 12 years in the Santa Fe's bridge and building department, 43 months of which were spent in Military Railway Service.

"On one occasion," he recalls, "two of us men from the 713th Railway Operating

Battalion were sent over to the French First Army to instruct them how to use British trestling for building steel bridge piers.

We had been working on a pier for about two weeks when high water washed it off the foundation. We then took a 5-ton chain block, tied one end to a tree and pulled the pier right back onto its base.

"The French were leery of our way of doing things and made a frame from two telephone poles to raise the last piece of steel to the top of the pier, but the frame fell over, breaking a Frenchman's leg. We finally convinced them that all they needed was a short piece of pipe and a rope block. They were surprised to see how simply the job could be done."

* * *

NEVER BEFORE in railroad history, we are told, have the pictures of two very-much-alive and beautiful women appeared on the cover pages of a timetable. These two ladies adorn the modernized Texas & Pacific timetables that came out recently.

The train schedules are listed in surprisingly clear type. A large folded picture map of the T&P system is included, together wth some useful travel information, and there are eight pages describing train connections with other lines at various points on the T&P railroad.

Among the items mentioned is this one: "Complimentary Coffee. Coffee is served 'on the house' every day at 10 a.m. and 3 p.m. on all T&P trains except those using the diners of other railroads." Little folks who travel on T&P trains these days receive a clever choo-choo menu on the dining car, a locomotive cutout suitably illustrated.

* * *

MACHINES in increasing numbers are easing the work of "gandy dancers." The New York Central System for instance, has recently put into service

NOW the girls ask BOB for dates
WE JUST COOKED UP A SURPRISE PARTY FOR PEG TONIGHT! BOB, CAN YOU TAKE ME?
SURE, GIVE ME A SEC TO GET READY!
WISH JOAN ASKED ME, BOB. YOU ALWAYS WERE LUCKY.
WHY DON'T YOU CHANGE YOUR LUCK THE WAY I DID?
I ALWAYS USE LIFEBUOY—THE ONLY SOAP ESPECIALLY MADE TO STOP B.O.—CONTAINS AN EXCLUSIVE PURIFYING INGREDIENT. LIFEBUOY EVERY DAY SURE KEEPS B.O. AWAY!
THIS SURPRISE PARTY WAS FUN, BOB—THANKS FOR TAKING ME.
THANKS FOR ASKING ME, JOAN...
AND THANKS TO LIFEBUOY!
MY DAILY LIFEBUOY BATH IS THE ONE BEST WAY TO GET LASTING ALL-OVER PROTECTION AGAINST B.O. USE LIFEBUOY FOR A WEEK AND YOU'LL USE IT FOR LIFE!
Used in the homes of 40 million Americans
LIFEBUOY HEALTH SOAP
ANOTHER FINE LEVER PRODUCT

Courtesy New York Central

No substitute for gandy dancers, this labor-saving track ballaster nevertheless makes for swifter, more efficient right-of-way repairs. Shovel work doesn't look too hard done this way

At right: **Belfast-Dublin express *Enterprise* headed by Number 83, the *Eagle*. Great Northern Railway, an amalgamation of several lines, operates 319 miles in Northern Ireland and 224 in Eire. The gage is predominately 5 feet, 3 inches**

Photos from J. M. Robbins, 1 El Verano, Wynnsward Park, Clonskeagh, Dublin

26 new, heavy, power-operated track ballasters—self-driven railcars with 3-ton ballast-tamping hammers—which eliminate tough manual work in roadbed rebuilding. Track power-operated jacks also are used.

The new ballasters were perfected after two years of cooperative effort of the NYC and Pullman Standard Car Manufacturing Co. While operated with a full section crew, a single machine can tamp the ballast under 400 feet of track per hour worked. This is about three times the amount of tamping accomplished by a gang using hand-operated air or electric tools.

Each of the new monsters weight 15 tons and is powered for movement over the rails by a gasoline engine. Wheels are adaptible to lateral movement in moving the machine from the rails. A gang of six men works with each machine: a foreman, an operator, and four laborers. The laborers walk beside the machine, two on each side, and each man throws a forkful of ballast under the hammers at every tie tamping.

* * *

IRISH RAILFANS are banded together in the Irish Railway Record Society, founded Oct. 24, 1946 for purposes comparable to those of North American railfan organizations, we learn from J. Macartney Robbins, Hon. Secretary, 1 El Verano, Wynnsward Park, Clonskeagh, Dublin, Eire (Ireland). Chairman of the IRRS is K. A. Murray, 13 Sandycove Ave. W., Dun Laoghaire, Eire. Either of these two officers will gladly give further information on request. Mr. Robbins sent us the following facts dealing with recent developments on Irish railways:

Ever since 1941 Eire's fuel situation has been a difficult one, as the country depends mainly upon Great Britain for its coal. The export to Eire lessened as time went on, which curtailed train service. The situation became so acute that for a while all Irish passenger trains, except a few locals, stopped running. Passengers had to use road buses.

Prior to that crisis the Coras Iompair Eireann concern had been experimenting with oil-burning on Number 264, a freight engine. The type of burner used was a Weir, placed at the forward end of the smokebox. The experiments proved successful, so three other locomotives were similarly converted. Then followed a strike of fitters at the crucial time. No more engines could be converted until this dispute was settled. However, the trouble subsided and the company continued its conversion program.

So far 70 coal-burners have been converted to oil. Generally speaking, the results are satisfactory. Trains serving Dublin, Cork and Galway are usually hauled by oil-burners, sometimes by 3-cylinder coal-burning 4-8-0's of the 800

class. The on-time record has improved, as no station time is now necessary for cleaning out the fire and getting rid of clinkers. The coal imported from England is not satisfactory, but with the advent of American coal the two lots are mixed, which helps matters quite a lot.

The Great Northern Ry. of Eire also has been experimenting. One of the GN main-line 4-4-0 passenger engines, Number 172, the *Slieve Donard,* was converted for a time, but was later reconverted back to coal. The next trial was to fit four 4-4-2 tank engines Numbers 1, 2, 115 and 116. These had the Laidlaw Drew type of burner, a vertical one, fixed from the bottom of the firebox. The most recent development has been to fit freight engine Number 159 to burn coal, with excellent results.

Last Aug. 11 the GN introduced a non-stop express between Belfast and Dublin, the first regular daily train running between the two cities without a stop, and the first regular non-stop run of more than 100 miles in Ireland. The distance is 112½ miles, which is covered in 135 minutes at an average speed of 50 mph. You may think this is not much to boast about, but owing to the scarcity of materials, locomotives and track are not kept in such prime condition as they were in 1939. Moreover, quite a lot of track renewals are being undertaken, which checks these express trains. Hauling this train is an engine of the V class, a 3-cylinder 4-4-0 compound, Number 83, the *Eagle,* which records speeds above 70 mph.

In the near future, Mr. Robbins will give us his impressions of a ride on the non-stop express.

* * *

STEEL CARS. The claim made in a recent issue of the *Southern Pacific Bulletin* that SP mechanical and engineering experts "built the first all-steel passenger coach", prompted us to check up on this subject. Some interesting data was supplied to us by T. J. Sinclair, manager, school and college service, Association of American Railroads.

Answering the question, "When were all-steel passenger train cars introduced?" the AAR's latest *Quiz* book states: "The first all-steel passenger car operated on a steam railroad was the *City of St. Louis,* a private car built in 1889. The first all-steel baggage car was placed in service in 1904. In the same year, all-steel subway cars were installed. In 1905, all-steel cars were placed in electric suburban service. The first all-steel express cars and the first all-steel postal cars were introduced in 1905. The first all-steel passenger coach employed in steam railway service was introduced in 1906."

The *City of St. Joseph,* cylindrical in shape, is illustrated in *Bulletin 46,* Railway

and Locomotive Historical Society, April '38.

The Pennsylvania RR. completed an all-steel experimental coach in 1906, designed especially for their main-line services into New York City. In 1904, they had built an experimental car of like nature for the Interborough Co. of New York City. Although the SP was queried last October 17th, no reply was received at the time of our going to press to support the claim made in the *SP Bulletin.*

According to the *Railway and Locomotive Engineer,* December, 1928: "The first *iron* passenger car was completed at the shop of William Cundell, Paterson, N. J., in 1859. The car could accomodate 60 passengers, being 46 feet long and 8 feet 4 inches wide over the frame, with a total length over platform of 51 feet 6 inches. The car was run on the Erie Railroad experimentally, proved successful, and was accepted by the original purchasers, the Boston & Worcester."

On January 16th, 1891, the *Railroad Gazette* stated: "A cylindrical car of all steel is now on exhibition at the Lake Shore station in Chicago. It was begun a few years ago at the Atlantic Works, East Boston, by a poor inventor, who had not money enough to finish it, and parts of it were consigned to the scrap heap. Messrs. Bird & Atkinson afterward took it up, and it was completed in Laconia, N. H. The car is made in the form of a cylinder about 53 feet long by 9 feet 9 inches in diameter, and is carried on two four-wheel trucks. . . . The cost of the car was said to be about $40,000 up to September, 1889." (Photo of this car appeared in R&LHS *Bulletin 46,* April '38, and a description in R&LHS *Bulletin 47,* September, '38.)

Said the *Railroad Gazette,* June 16, 1905: "The first all-steel passenger cars to be in actual service were, we believe, the side-entrance suburban cars on the Illinois Central, which were built in the early part of last year. These were designed almost simultaneously with the Gibbs type of cars, which are in use on the New York Subway, but they antedate them some months in being put in service."

Further light on the subject is shed by the following excerpt from *Proceedings Master Car Builders' Assn.,* Vol. 38, p. 208, 1904: "The Illinois Central has designed and built at its own shops quite a number of large steel suburban cars, having 100 seats. . . . When the Interborough Co. of New York decided to use steel cars, they found it impossible to interest any of the large car builders of this country, and the sample car was designed and built by the Pennsylvania RR. Co. as an accomodation. Tests of the car have been so satisfactory that the Interborough Co. has given the order for the construction of 200 steel passenger cars, and this is really the beginning of this industry in the United States."

Finally, we quote from "Origin and Development of the Steel Passenger Car on American Railroads," by George Gibbs, in Long Island RR. *Information Bulletin,* August-September, 1939:

"Mr. Cassatt (PRR president) authorized the writer to say to Mr. Belmont, president of the Rapid Transit Subway Construction Co., that he, Mr. Cassatt, would because of the interest that his road had in procuring a safe incombustible car for his tunnels, build at the Altoona shops a sample car. . . . Mr. Belmont accepted this offer . . . and working drawings were completed in October, 1902. . . . The car was finished in December, 1903, turned out to be somewhat clumsy in appearance and heavier than desirable . . . but the experiment indicated that the type was entirely practicable.

". . . Three hundred cars were ordered of the American Car & Foundry Co. They were delivered on time and are still running on the Interborough System—the first all-steel pasenger cars to be built and put into regular service (October 29, 1904).

"While, as noted in this memorandum, the first all-steel passenger cars were run in the New York Subway, followed by the Long Island and New York Central railroads, all of these were for electrically propelled motorcar trains in subway and suburban services.

However, the all-important aim of the Pennsylvania RR. was to preclude the use of any wooden cars in its tunnels of the New York terminal. This meant a vast program for the building of sufficient all-steel equipment for the main-line services entering New York City.

"Steps were taken to accomplish this great task, beginning with the completion of a sample steel coach in 1906, followed by an improved design in 1907 and according to which 200 cars were ordered and completed in 1908."

* * *

IN THE DECEMBER ISSUE of Railroad Magazine, mention was made of the English-Scottish races of the early '90s. John M. Gorrie, of 303 E. Shaw St., Charlotte, Mich., points out a "wee bit discrepancy," however. "The Great Western Railway Co., whose main line extends from Paddington, London, to Bristol, had nothing to do with these contests," he writes. "The systems in question were: 1-The West Coast lines, namely the London & Northwestern and the Caledonia Railway Co., the former extending between Euston terminal, London, and Carlisle (Cidadel Station) and the latter, between Carlisle and Union Station, Aberdeen, and 2-The East Coast lines (Great Northern, North Eastern, and the North British Railway Co.), linking King's Cross, London, with Donchester, Donchester with Edinburgh, and Edinburgh with Union Station, Aberdeen. At Dundee the North British ran over the Dundee & Arbroath Joint Railway to Arbroath, and between Kinnaber Junction and Aberdeen on tracks of the Caledonian.

"On the West Coast route LNWR at various times used engines of the 2-4-0 and 4-4-0 wheel arrangements, simple and compound. The compounds were designed by F. W. Webb and turned in some remarkable runs. The Caledonian, or 'Caley', as it was affectionately known, used engines of the same wheel arrangements although the 2-4-0s had distinctively high wheels "seven feet-six inches". They were originally built to the design of Ben Conner and by standards of modern locomotive practice their high-speed performance on heavy grades, or 'banks' as they are called in British parlance, was amazing. For the steepest climbs were encountered on this West Coast route. In England the *Penine Chain* had to be overcome. In Scotland, Shap Summit, over the Cheviot Hills on the Border, and the Auchterarder Bank at the end of the Ochill Hills, involved gradients that averaged a one foot rise for every eighty-seven feet of line, also one mile with a ratio of one to seventy-three. Intermediate stops were Crewe, Carlisle, Glasgow and Perth, then on to Kinnaber Junction, from which point the winner had the right-of-way into Aberdeen.

"The East Coast, on the other hand, had comparatively level tracks, and a more direct route. There was nothing remarkably outstanding about its runs, with this exception, that the Great Northern used the famous old "single drivers" built by Patrick Stirling. Other systems involved coupled up 4-4-0s or the 'four-coupled bogies.' One of these engines, the Number 224 was in the Tay Bridge disaster of December 15, 1879, when the girder section of the two-mile-long structure collapsed during a severe winter gale, dropping the entire train, then engaged in one of its races, into the river below. The 224 was subsequently rebuilt and was still in service in 1918.

"I personally have a shoe horn which I formed from a boiler tube of the Caledonian Railways No. 1046, while I was serving my apprenticeship as a locomotive engine fitter. This locomotive had seven-foot-six-inch drivers and was equipped with a copper boiler, copper stays, and brass flues. The airbrake cylinder was placed between the drivers, with the piston working downward forcing the brake blocks outward against the tires through linkage.

"Old Jock Shields, at Dundee West, was her driver. His fireman at the races was Alexander "Sandy" Morris. Old Jock seldom spoke about the races, but there were times when he would smile

and tell us apprentices and engine wipers that 'Och, there were times when we were supposed to be clocked at ower eighty miles an 'oor but we went fester.'

" 'How did he know?' we would ask.

" 'Oh, the teleyphone poles whipped past too fest,' he'd tell us, and once: 'We went sae fest, Sandy an I juist laughed at ane anither. Auld Mac Greegor' (that was the 1046) 'shogged like an auld gray mare.'

"The engine was oiled during the run by uisng a garden-type watering can with a 'rose spray' on it. The engine driver would crawl out on the footplate and pour oil over the motion and the side rods. That was one helluva job for the footplate had a camelback in it. One time they threw away the 'rose,' deluging the parts with oil, and let it go at that."

* * *

INFORMATION WANTED. "Is Sacramento Northern caboose Number 1608 the oldest caboose in active service in this country?" asks Harold H. Hargon, 710 E. St., Apt. 9, Sacramento, Calif. "She bears brass plates inside, just over the center pins, dated 1880, manufactured by the Marty Foundry, Meridian, Miss., and was overhauled in the SN's Mulbery shops in 1930 but still has the original spoke wheels under her. The 1608 is in local service between Chico and Yuba City, Calif."

J. W. Wright, 1013 Robinson Ave., Jackson, Miss., cherishes bright memories of the East Tennessee & Western North Carolina and hopes some reader will give him facts about this narrow-gage line.

Being an ex-rail, John B. Davis, General Delivery, Los Angeles, Calif., longs for the smells of steam and hot brakeshoes. He wants to hear from old-timers who used to wield the scoop or twist binders on the old Minnesota & International Falls between 1910 and 1919. John reminisces: "Remember the Great Northern's interlocker crossing at Nashua, Minn., where you had to stop and help the towerman sweep out the derail so you could get the wheat drag over the crossing, with the mercury at 20 below and a 60-mile gale blowing a mixture of sand and snow?"

Lewis Voss, Box 151, Donaldson, Ark., writes: "My father, George C. Voss, worked on the Quebec bridge (photo in Feb. '48 issue). He was sent up there right after the fall of the first center span, and helped to build and place the second span. That type bridge was built there, I believe, because the current was too swift for falsework. My father worked for the Illinois Central, the Northwestern, and the Wabash, in the early 1900s. I want to hear from anyone who knew him then."

A boomer of the old school who claims to have worked for 90 days as night yardmaster at Pocatello, Idaho, in addition to a string of roads as long as your arm, is Arthur G. McQuary, now invalided in Ward E-5, Naval Hospital, Long Beach 4, Calif. Mac began railroading in 1897 as a roundhouse helper at Clinton, Mo., on a road that has since become part of the Frisco. He writes: "Would like to hear from some of the boys."

* * *

LAST STOP is the Reader's Choice Coupon *(page 145)*, which guides your editorial crew in selecting material for future issues of *Railroad Magazine*.

Some readers use the coupon. Others prefer not to clip the magazine; they send home-made coupons, postcards or letters. Regardless of how votes are written, all count the same. Results of balloting on the March issue show as follows:

1. Delano, *Hubbard*
2. Rapid Canyon Line, *Lee*
3. Light of the Lantern
4. On the Spot
5. Singing Brakeman, *Cunningham*
6. British Columbia Rolls On, *Neuberger*
7. Eat Meself Strike, *Armes*
8. Movie Station, *Woodson*
9. Women and Boxcars, *Jackson*
10. Locomotives of the Panama Railroad Most popular photos: pages 39, 126, 54-55.

Railroad Camera Club

ITEMS sent to the *Switch List* and *Model Trading Post* are published free, in good faith, but without guarantee. Write plainly and keep 'em short. Print name and complete address.

Because of time needed to edit, print and distribute this magazine, all material should reach the Editor eight weeks before publication date. Redball handling is given to items we get the first week of each month, if accompanied by latest Reader's Choice coupon (clipped from page 145 or home-made).

Due to scarcity of space, we prefer that no reader be listed here oftener than once in three months.

Use these abbreviations: *pix.*, photos; *cond.*, condition; *ea.*, each; *elec.*, electric; *env.*, envelope; *eqpmt.*, equipment; *esp.*, especially; *info.*, information; *n.g.*, narrow-gage; *negs.*, negatives; *p.c.*, postcard; *pref.*, preferably; *tr.*, train.

And these photo sizes: Size 127—1⅝x2½ inches; Size 117—2¼x2¼; Size 130—2⅞x2⅞; Size 118 or 124—3¼x4¼; Size 122 or p.c.—3x5½; Size 616 same as 116, on thin spool; Size 10—2¼x3¼ inches.

The term *tts*, refers to public timetables, unless preceded by *emp.*, when it means employes' (operating) timetables.

(R) indicates desire to buy, swap or sell back issues of *Railroad Magazine* or its predecessors, *Railroad Man's* or *Railroad Stories. (Specify condition of each copy.)*

(*) indicates juicefan appeal.

RAILROAD CAMERA CLUB is open to all who collect railroad or streetcar pictures or other railroadiana such as time tables, passes, train orders, trolley transfers, magazines, books, etc. There are no fees, no dues.

Membership card and pin are given free to anyone sending us the latest Readers Choice coupon and a self-addressed stamped envelope. If you don't want to clip page 145 make your own coupon. Address *Railroad Magazine*, 205 E. 42nd Street, New York City 17. Tell us what you want or what you offer; otherwise your name will not be printed here.

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Switch List

F. G. ACKERSON, Box 8677, Wilkinsburg, Pa., wants to locate a photo of a Lake Shore & Michigan Southern 4-4-0 which had a run into Portage, Mich., in 1891; similar type to *Socrates*, loco that exited safely from Ashtabula wreck.

ARTHUR W. ALTSTADT, 760 Milwaukee Ave., Chicago 22, Ill., will pay $2 or reasonable price for B&O emp. tts. Ind. Div., none prior to '44.

(R) RALPH ANASTASIO, 174 E. 90th St., New York 28, N. Y., wants *Railroad Magazine* Jan., Apr., July, Sept. '47; will trade new *Trains, Tracks and Travel*, good cond.

(*) RICHARD J. ANDERSON, 4607 N. Marmora Ave., Chicago 30, Ill., will sell size 116 pix any elec. line in operaton on Jan. 1st, '48, exc. Walla Walla, Wash., 5c ea., plus post.

ARTHUR B. ARMES, 951 Alamos Ave., Sacramento, Calif., will exchange rr. views, p.c.'s., stas., etc. with rail pen pals the world over.

(R) DURWARD BARKLEY, Lakeville, Ind., will trade back issues several outdoor mags.; wants *Railroad Magazine* vrior '42. Send for list.

(*) CPL. DAVE BEATTIE, 17135041, Hq., 4140th BU, Wright Field, O., sells pix St. Louis P. S., Ill. Terminal, LVT, CSS&SB, CNS&M, 90 other juice lines, 8c ea.; 13 for $1. Send for list. Buys or trades elec. pix.

LEE BEAUJON, Canaan, Conn., offers *Trains*, Nov. '40; Dec. '41; Mar., Aug., Oct. '43; Mar., May 44; Mar. '45; *BLW* mags. Oct. '40; Oct. '43, Oct. 39; Mar. '47. Wants *NH Housatonic & CNE* data.

(R) RICHARD B. BENNETT, Jr., 200 S. Peach Ave., Tyler, Tex., will sell *Railroad Magazine* June '34; Feb. '36; May '41; Jan. '42-Dec. '47, exc. Feb., July '46; perf. cond. $14, plus post.

(*) W. P. BENNETT, 7911 Avalon, Chicago 19, Ill., wants loco, trolley, frt., signal pix; tr. ords. D&RGW, passes, old tts.; around 1900 or prior.

(*) ROGER W. BOGENBERGER, 2050 N. Booth St., Milwaukee 12, Wis., trades size 116, 616 negs.; any elec. line. Also trolley trsfs.

DONALD H. BRAY, 62 Gledhill Ave., Everett 49, Mass., will buy pix, p. c.'s., travel folders, tkts., stories of *Mount Washington Cog Ry.*, old or new.

(R) C. W. BURNS, 1634 E. 53rd St., (Elms Hotel), Chicago 15, Ill., has *Railroad Magazine, Trains, Ry. Age* '27 to '42; also size 116, 122 pix, negs. rrs. in his area; also UP, C&S, W&LE & Monongahela to trade or sell; will swap negs. Write for lists.

(*) WILLIAM BYRNE, 6 Alfred St., Blackburn, Victoria, Australia, will exchange Victorian Ry. Tramway tkts., for same U. S.; also sends *Tram, Tracks, Trolley* car journal for Am. rail pix, mags.

(*) CHARLES G. CHALOUX, 677 E. 231st St., Bronx 66, New York, will sell vast collec. interurban, trolley pix; many little known lines. No lists. Write for details.

JON CLAYTON, 710 Washington St., Wilmington, Del., will sell for best cash offer *Model RR.*, vols. 1 to 5; bound, in perf. cond., never used PRR calendars '37 to '46, various cond., most very good.

R. S. CLOVER, 530 Edge Hill Rd., Willow Grove, Pa., has rail books, tts., mags., booklets, folders, old postal view cards, other material for railfans. List for stamp.

E. A. COXHEAD, *you did not give your address.*

JAMES L. DAVIS, 524 1st Ave., N. W., Oelwein, Ia., wants to trade or buy size 620 C&W pix, esp. locos in action. Write first.

ROLAND F. DUVALL, 1610 Thomas Ave., Baltimore 16, Md., wants to trade B&O emp. mags. for other rds. ea. month, starting Jan. '48 issue.

(*) JOHN L. ELIAS, 1304 E. Division St., Decatur 40, Ill., has excell. pix Wabash streamliner loco, 703; also Ill. Term. elec. loco 70, 8x10 glossy pix, 75c.

(R) JOHN ENDLER, Jr., 23 Hughes St., Forty Fort, Pa., will pay cash or trade few old issues *Railroad Magazine* for *Trains*, unclipped, good cond., Nov., Dec. '40; all '41; Feb.-May, Sept.-Dec. '42 Jan., June-Aug. '43; Jan., Feb. '44; Aug. '45.

(*) ROBT. L. ENGLAND 30 Elm St., Hingham, Mass., will sell size 5x7 copies B&M maint. eng., rail car; also Sperry car at Weirs, N. H., 30c ea.; or will trade for old rr., trolley or NE stero pix; also will do pix work.

HARRY E. ENTLER, 6412 S. Aberdeen St., Cricago 21, Ill., has several old and valuable tts. to dispose of.

(*) FRED FELLOW, Gen. Del., Farmington, Utah,

offers emp. tts., 1, 2, 3; supply Int. elec. Ry., 50c ea.; $1.50 for set; 1000 other Western emp. tts. State needs.

(R) JOHN R. FITSCHEN, 6233 University Ave., Chicago 37, Ill., will sell *Railroad Magazine*, Apr. '43; '44; Jan. '45; Apr., May '47; Dec. '45 *Trains;* NYC Info. Booklet. One lot only: $5 plus post.

(R) JAMES L. GAYNER, 327 Magnolia Ave., Piedmont 10, Calif., will trade or sell *Railroad Magazine*, '35 to '47. State wa ts. Will sell Yosemite Valley emp. tts. $1; buys size 616 negs.

J. R. GORHAM, LaPlata, Mo., will sell emp. tts., several rds., 1st-class shape.

(*) DONALD R. GOSHERT, 506 W. 12th St., Sterling, Ill., wants elec., street, interurban pix, eastern and mid-estern U. S., Ontario Rys. Send list, price.

HAROLD J. HARGRAVES, 49 Dix St., Dorchester 22, Mass., wants size 6'6 or 116 pix Manchester St. Ry., Nashua St. Ry., Concord & Portsmouth Elec. Ry., Div. of B&M, Berlin St. Ry.; Laconia St. Ry. Wants to hear from L. Scannell.

(R) F. M. HARRIS, Ashland, N. H., will sell *Railroad Magazines*, '37 to '45 ea., perf. cond.

(R) LARRY HARRISON, 5009 9th Ave., Sacramento, Calif., has *Railroad Magazines* from '33; also large list SP, WP, SAC North, NWP, NCNG, other Calif. short lines pix, size 616. List on request.

(R) ALFRED J. HOLCK, 2226 S. 20th St., Lincoln 2, Nebr., wants *Railroad Magazine* '30 to '34, '42; will trade *Model Builder* '36 to '43; *Model Railroader*, May '44 to Aug. '46; has 70 Korean train pix, plus 500 Am., mostly B&O, B&M, CB&Q, NYO&W, UP. List, sample, 10c.

HAROLD H. HUDGINS, Box 143, Oakdale, La., has pix of old T&P locos, n.g. locos, C&PM, Iranian State Rys., others; can furnish in glossy prints, sizes from 3½x4¼ to 8x10, small size 12 for $1. List for stamp.

T. M. HOWARD, 313 W. 33rd St., New York City, offers to sell 21-jewel, Hamilton rr. watch, cash or money order; brakeman's elec. lantern, $2; also rr. textbook by Nichols, $3.

WALTER HUDNALL, Box 265, Spray, N. C., would like to corres. with engineer and fireman or others to swap ideas, info., rr. material.

RICHARD JACOBSON, 162 Sylvester St., Manchester, N. H., will sell B&M pix or trade for other B&M pix; B&M emp. tts. before '40. List for stamp.

(R) BILL JONES, 48 Cedar Ave., Rockville Center, L. I., N. Y., wants *Railroad Magazine* May '36, Jan. '41; Feb. '43; send price on p. c.

ARTHUR L. JOHNSON, 510 Cass St., Niles, Mich., will sell rr. books, *Off. Guides*, passes, tts., emp. tts., other misc. railroadiana, your own prices. Send for free auction list.

DAVID KURSTIN, 935 15th St., S. E., Washington 3, D. C., will trade or sell *Nat'l. Geog.; Trains; Off. Guides;* B&O, IC, MP, Rdg., CNJ mags.; other railroadiana, good cond. Free list with prices. Wants to hear from friend in Cinn. who had AP pix.

(*) ADDISON A. LAKE, 1338 W. 10th Ave., Vancouver, B. C., Canada, has size 616 neg., pix Canadian, U. S. steam, elec. lines. Negs., 2 for 25c; pix, 3c ea.: 40 for $1 plus post.; 5c for neg. list, no print list. State wants.

(*) ALFRED K. LEVY, 1740 Greenleaf, Chicago 26, Ill., wants good pix all types U. S. and foreign, rail, trolley lines and eqpmt. to use for 2x2 slide collec. Offers equal no. free 2x2 slides from large list, available for stamp. Guarantees safe, quick, return, all pix.

ERIC LUMER, c/o BM/FRVV, London, W. C. 1, England, would like to corres. with pen friends in America.

(*) ROBT. McLEOD, 731 S. 28th St., Milwaukee 4, Wis., has new revised list elec. pix TMER&T, CNS&M, CSL, BCER, many others, for sale or trade. List for stamp. Pays highest prices for good size 616 negs. Has many recent emp. tts. for sale.

JOSEPH McMAHON, 15 Adrian Ave., New York, N. Y., offers '46 and '47 *Off. Guides*, $1 ea. p.p., east of Miss. River. Wants to buy *R&LHS* Bulletins, Nos. 26, 34, 48, 40, 41, 43.

H. C. MANLY, Main P. O., St. Petersburg, Florida, has started collec. rr. switchman's lanterns; wants info. on where to obtain others.

(*) WALTER MARTIN, 63 Florence Ave., Hawthorne, N. J., wants pix, track maps, lists of industries, other info. on all frt., only elec. rrs., esp. York Utilities, Tex. Transportation Co., Valley City Street, Interurban Ry.

(R) THOMAS McCORMACK, 338 E. 82nd St., New York City 28, wants to buy *Railroad Magazine*, Jan. '43.

JOHN A. MELLIN, 46 E. 91st St., New York 28, N.

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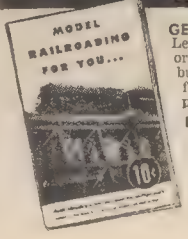

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H. T. MOULTON, 25 Valley St., Medford, Mass., specializes in Suncook Valley, Temiscouta RR. Exchanges or buys pix, memorabilia.

HARRY L. PETERSON, Box 284, Ponca, Nebr., wants old duck stamps; will trade p. c. size loco pix CB&Q inspection engs., Lake Tahoe No. 1, and others for the stamps.

J. B. PRICE, Box 753, Midland, Tex., will sell pix T&P, RS&P, AT&SF, fixed and motor list and pic, 10c.

J. REAY, 1 Conyers Gardens, South Pelaw, Chester-le-Street, County Durham, England, would like to corres. with schoolboy reader.

(R*) CHAS. A. ROWE, 218 W. Terrace St., E. Syracuse, N. Y., will swap for *Railroad Magazines*, good cond., and steam, elec. and Diesel negs.; has new list 355 pix, size 116, 103 diff. rds., to sell or trade; also model mags., emp. tts. List pix, sample, for stamped, self-address. env.

OLE RUUD, 2633 W. Thames St., Chicago, Ill., wants rr. calendars.

ARVID A. RYAN, Box 143, Bellevue, Tex., will swap or sell size 116 pix FW&D, MK&T, RI, CB&Q locos for pix other rds. 10c for list, sample.

(R) CHARLES S. RYAN, 1435 Cabrillo Ave., Venice, Calif., will sell Dec. '29 to date *Railroad Magazines*, unclipped, 4 homemade covers, indexed to Dec. '47 to highest bid over $75. f.o.b.; holds bids 30 days. Also has Dec. '29 to Jan. '46, 8 good, 7, no covers, 2 clipped; lot $5. or 15c to 75c ea. List for stamped env.

WILLIAM SCHOPP, 445 S. Logan Ave., Trenton 9, N. J., wants 2 vol. set *Railway Wonders of the World*. Will trade *High Iron, Iron Horses, Cable Car Days in S. F.* or do watch repair work in exch.

(*) BOB SCHUUR, 174 Edgemoor Ave., Kalamazoo 34, Mich., will sell or swap many excell. elec., steam pix. Write for list. Will buy any Mich. elec. line pix; send list.

(R) ERNEST SEVDE, U. S. D. agr., 110 W. State St., Toledo, Ia., will sell *Railroad Magazines, Trains, Off. Guides*. Wants negs., size 116 steam rds.; also *Car Builder's Cyclopedia*. Stamp for info.

JOHN SHELFORD, 105 Joliet St., S. W., Washington 20, D. C., will sell ICS or *Railway Signaling;* consists of 11 pamphlets; make an offer.

HOWARD SHIDELER, Rt. 1, Box 45, Linden, Calif., wants to buy or trade watchfobs advertising RR. cranes, steam shovels, tractors, any otrer contractors eqpmt.

PHILIP SHORT, 816 Distel, Detroit 9, Mich., will buy size 116 pix, negs., Wabash locos or borrow negs. for copying. Send lists.

(*) WALDEMAR SIEVERS, 251 Miller Ave., Mill Valley, Calif., will sell negs., steam, elec. Calif. rds., size 616, 620. List, prices for stamped env.

(R) RICHARD SILLIMAN, 2410 King St., Alexandria, Va., has *Railroad Magazine*, Mar., Nov., Dec. '40; Jan.-Mar., May '41; Feb. '42; Apr., Sept. '43 excell. cond.; needs May '40; Oct.-Dec. '41; Mar., Apr., Nov., Dec. '42; Jan., Aug. '43. Will trade copy for copy.

(*) DONALD SIMS, Box 548, Main Station, Los Angeles, Calif., will trade PE tts. for tts., other elec. lines also map PE lines for maps, other lines.

L. E. SMITH, *you did not give your address.*

(*) H. H. SWAIN, Box 572, Ben Franklin Station, Washington, D. C., will send 2 Capital Transit weekly passes in exch. for ea. rr., trolley pix sent him. Any size, any rd.

(*) LOUIE H. THOMAS, Kingsvill, Tex., collects rr. pix locos, gas, elec., also horse cars.

(*) LEONARD Y. TRIPP, S. Erie St., Mayville, N. Y., offers pix of last run on JW&NW, also some choice ROW, spec. movement views up to 5x7, many negs. Send stamped, address. env. for details.

(*) VIC WAGNER, 6341 S. Wolcott Ave., Chicago 36, Ill., wants size 616 negs., pix juice frt.-work eqpmt. Offers free list Denver juice pix. Can obtain high quality 616 Chicago juice negs. upon request.

(R) J. F. WALSWORTH, 35 Griggs, S. W., Grand Rapids, Mich., wants Oct. '44 *Railroad Magazine*, good cond.

A. D. WELLBORN, Box 1690, Ft. Worth, Tex., has bound vols., all issues *Trains* to trade for vols. 1, 2, 7, 8 *Model Railroader*. List you want. [illegible] state wants

J. J. WEISHAAR, Jr., 5 N. Broadway, Nyack, N. Y., will trade size 616 negs. NYC steam locos to swap

Reader's Choice Coupon

Stories, features and departments I like best in the May issue are:

1. .....
2. .....
3. .....
4. .....
5. .....
6. .....

Best photo is on page.....

Name .....

Occupation .....

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for same size PRR. Also will buy size 116 PRR negs.

KENNETH R. WULFF, R. R. 2, Liberty Center, O., has size 116, 120 pix to sell; SP, NYC, DT&I, Wabash, AT&SF, many other pix. List, sample pix, 10c.

Model Trading Post

DOUGLAS BERGGREN, Wilcox, Nebr., will sell Lionel tr., 3 scale-model pass. cars, 1 gondola, 1 automatic unloading merchandise car, 12-wheel eng., 45 ft. trk., 2 r.c. switches, 2 other accessories, $12.

CLYDE BUXTON, R. R. #2, Loveland, O., has very old Lionel, Ives, Dorfan, German tr. eqpmt. Best offer takes all or any part. Send for list.

TERRY COLLISON, 1703 Broom St., Wilmington, Del., wants std. gage steam-type loco, frt. or pass. cars, good running cond., std. trk.; also O gage switches, trk., old trolleys, toys, dolls, Christmas ornaments.

C. DANTZMAN, 224 E. Van Beck, Milwaukee 7, Wis., will swap AF, HO pac. Fruit Exp., good cond. for AF 3/10 plastic Pullman or cattle car.

ARTHUR S. DAVIS, 665 Hancock St., Wollaston 70, Mass., will trade 8 pr. Baker automatic couplers, slightly used for Mantua perfection couplers, HO or OO.

ROBT. B. DUNCAN, Wincoma Dr., Halesite, N. Y., will sell 13 O-gage cars, $100 for lot or singly. List for stamp.

R. L. DUCKWORTH, 303 Vester Ave., Ferndale 20, Mich., will sell #1663 switch eng.; two 2677, O27 gondola cars; 2657, O27 caboose; 1 pr. 1121 r.c. switches; 20 sec. str., 15 curved O27 trk. All eqpmt. excell. cond.

DALLAS A. GIBERTSON, 15939 Sherman Way, Van Nuys, Calif., will sell HO frt. cars, Mantua couplers. Some have Micro-Motive trucks; at kit prices.

GEO. HAYES, 2531 S. Wayne, Ft. Wayne 6, Ind., wants 2 pr. elec., 1 pr. manual switches, O27 gage; 2 tinplate pass. coaches, assorted accessories. Fair prices pd.; eqpmt. in good working cond.

JOHN R. KOCH, 5 Main St., Joliett, Pa., wants Lionel *Flying Yankee* streamliner #267W. List your want.

HAROLD E. KNOX, 9124 MacArthur Blvd., Oakland 5, Calif., will sell or trade for HO gage eqpmt.; O27 gage Marx tr. with 5 cars, 2 auto. uncoupling sec.; 19 str., 13 curve trk.; 3 elec. switches, 1 pr. man. switches; crossover; elec. dead-end bumper, all good cond. State offer.

BASIL W. KOOB, 108 North 3rd St., Ft. Dodge, Ia., wants to hear from party operating live steam 2-ft. gage amusement park line. Has streamlined Milw.

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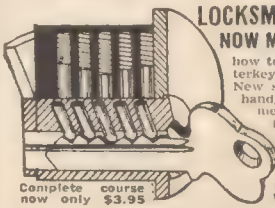

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LOUIS F. LEJEUNE, R.R. No. 1, Fort Erie, Ont., has two complete miniature trains, one spare loco with spare parts for sale; good shape, replicas of famous steamers run at Crystal Park, Ont., Canada.

DAVID McCOY, 628 Park Ave., Terr., Yonkers 3, N. Y., wants '46 Lionel Co. (O and O27 gage) catalog.

BOYD J. McWHORTER, Moorefield, W. Va., wants Lionel O gage locos, parts. Specify price, cond.

MYRON A. MILLER, 922 Chew St., Allentown, Pa., will sell 117 items compl., HO model rr., 2 Hudson eng., dockside, 66 cars, incl. pass. cars, cabooses, all type bldgs., water tanks, semaphores, etc., 100 ft. brass rail. Best offer locally, $250; buyer must take all. Write for compl. list.

JAY OBRION, 211 Ellis St., Peoria, Ill., has compl. line Marx eqpmt. Write for list.

PATRICK PAGONA, 88 Maple St., Weehawken, N. J., has Lionel O gage frt. cars, large stamp collec., foreign stamps, Detective stories, 200 pocket mags., all new, perf. cond. Wants Lionel O gage cars, switcher-tender, or what have you. Answers all mail.

Dr. D. U. PARISH, D. C., 407 Haberfelde Bldg., Bakersfield, Calif., has TT gage eqpmt., never used, 35 ft. trk., 5 switches, 3 boxcars, 1 caboose, 1 comb. coach, 1 Pullman, 1 obs. car, new Scantilde trsfs.; $35.

BOB ROBERTSON, R.F.D. 1, Patoka, Ind., will swap for good AF, HO tr. eqpmt., 2 AF 3/16 scale Atlantic type locos, 3 pass., 3 frt. cars, plastic cars, auto couplers, 26 sec. 2-rail trk., Lionel 156 sta., all excell. cond.

LEON A. SISCO, Hopewell, N. J., wants to trade Lionel 221 eng. and new tender for a 225 in good cond., or will buy; also has few new AF S-gage Hudson trs. sets, with trsfs., $26 ea. old Lionel or AF O gage set to trade. Write for details.

JOSEPH SINCAVAGE, 33 McKibben St., Brooklyn 6, N. Y., wants to trade for best offer Scott Int. Jr., stamp album with 2240 stamps, incl. 26 U. S. Mint blks. for HO eqpmt. Write for details.

P. E. THAYER, 1011 Navarre Ave., Toledo 5, O., wants Lionel PRR 0-6-0, tender, 227, 228, or 906B, Lionel 2900 series frt. cars, all O72 gage, trk., switches, good cond.; has 6 pc. Lionel pre-war elec-coupler truck sets.

DANIEL M. TWOMEY, 7 Maine Terr. Somerville, Mass., will buy O gage double truck frt. cars, Ives or Marx. Give descrip., color, no.

JOS. WILHELM, 4123 Danneel St., New Orleans, La., builds Mantua Moguls, $34.; Mantua roundhouse 0-4-0 switchers, $29.; spray painted and tested.

Flagstops

FANTRIPS. The Joint Railfan Trip Committee of Lackawanna Terminal, Hoboken, N. J., announces a heavy schedule of Spring excursions. Apr. 11, "doodle bug" tour of Erie main line, Graham line, Newburgh branch, Port Jervis Yard and enginehouse; Apr. 24, Sat. trip over PRR, LVRR or CNJ-Rdg.; May 16, all-day trip of season, suggestions as to where welcome; June 5, New Haven from Grand Central to Fremont via Port Morris branch, Van Nest shop, Harlem Rv. yards, Hell Gate; June 19, milk-train tour over NYO&W, Scranton Subdivision to Mayfield Yard, winding up with inspection tour of DL&W's Scranton facilities Sun. a.m.

Railroad Enthusiasts announce a trainride over these B&M branches: Central Mass.-Greenville-Hollis-Stony Brook-Lexington. Leaves No. Sta., Boston 9 AM, ED ST, Sunday, April 25. A 9½-hour ride behind a B&M Mogul for $3.75; tickets thru Cyrus Hosmer, Jr., Trip Chairman, The Railroad Enthusiasts, Inc., N.E. Div., 34 Chester Rd., Belmont 78, Mass.

Dr. R. M. Edgar, Asst. to the President, B&M, will address the NY Div of Railroad Enthusiasts at meeting of April 28th at 7:45 p.m., Rm 5928 Grand Central Terminal. There will also be a B&M movie.

* * *

ON SALE. The New York Chapter of the Railway & Locomotive Historical Society offers a limited number of its out-of-print bulletins for sale at $1 to members, $2 to all others. Listed are Nos. 39, 43, 44, 46, 47, 48, 50, 51, 53, 55, 58, 59, 61, 61a, 62, 63, 65-71. If interested, write R. C. Schmid, Chairman, Box 434, Grand Central Annex, New York City, N. Y.

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